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Development and Application of a Water Supply Financial Reporting System
Volume 2

Kenton County Water District No. 1
Ft. Mitchell, KY

Prepared for

Municipal Environmental Research Lab.
Cincinnati, OH

Aug 83

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16. ABSTRACT

This two-volume report describes the development of a computerized financial reporting system (FRS) for the Kenton County, Kentucky, Water District No. 1 (KCWD). The system was designed and implemented after a computer based cost analysis system (CAS) had proved to be advantageous and had demonstrated the value of automated data processing. Together the two systems will help the utility control costs and manage and rapidly expanding system more effectively and efficiently.

The objectives of the FRS were (1) to provide computer programs that produce a general ledger accounting system and financial reports, (2) to function as a modular system that can be used either independently or with the CAS, and (3) to veryify its satisfactory operation through practical applications at KCWD.

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August 1983

DEVELOPMENT AND APPLICATION OF A WATER SUPPLY FINANCIAL REPORTING SYSTEM

VOLUME II

by

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DISCLAIMER

Although the information described in this article has been funded wholly or in part by the United States Environmental Protection Agency through assistance agreement number CR-806448-01 to Kenton County, Kentucky, Water District No. 1., it has not been subjected to the Agency's required peer and administrative review and therefore does not necessarily reflect the views of the Agency and no official endoresement should be inferred.

FOREWORD

The Environmental Protection Agency was created because the public and the federal government were increasingly concerned about the dangers of pollution on the health and welfare of the American people. Noxious air, foul water, and spoiled land are tragic testimonies to the deterioration of our natural environment. The complexity of that environment and the interplay among its components require a concentrated and integrated attack on the problem.

Research and development is that first step in problem solution, and involves defining the problem, measuring its impact, and searching for solutions. The Municipal Environmental Research Laboratory develops new and improved technology and systems: 1) to prevent, treat, and manage wastewater, solid and hazardous waste, and pollutant discharges from municipal and community sources; 2) to preserve and treat public drinking water supplies; and 3) to minimize the adverse economic, social, health, and aesthetic effects of pollution. This publication is a product of that research and is a most vital communications link between the researcher and the user community.

The Safe Drinking Water Act of 1974 establishes primary health-related standards and secondary aesthetics-related but nonenforceable guidelines for drinking water supplies. These standards will bring about a fundamental examination of the way water is handled before it is delivered to the consumer. Many of these changes will have an economic impact on the affected water utilities. This report describes a water supply financial reporting system that was developed to be compatible with a water supply cost analysis system. The financial reporting system, along with the cost analysis system, provides a management analysis and report system that has broad application to the water supply industry. This report, Volume I, describes the background, development, and application of the financial reporting system. Volume II contains the documentation of computer programs that create the system.

Francis T. Mayo
Director
Municipal Environmental Research Laboratory

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ABSTRACT

The United States Environmental Protection Agency (EPA), in an effort to provide the water supply industry with management tools, recently developed a water supply cost analysis system (CAS). The system was implemented and verified at the Kenton County, Kentucky, Water District No. 1 (KCWD) utility. When the CAS was implemented, it functioned with a manual financial reporting system; KCWD therefore operated a partially computerized financial accounting system. After several months, KCWD recognized the need for an automated accounting system within their utility, and requested assistance from the EPA for development and implementation of a computerized financial reporting system (FRS). Although the FRS is designed for a specific application to the KCWD utility, other water utilities could use the system with some programming alterations. This FRS gathers accounting data by account number, and then creates three reports for the utility: the trial balance, the statement of income and expenditures, and the balance sheet. The FRS development and operation, including programming, documentation, and operating instructions, are described in this two volume report. Volume I includes a description of the FRS; Volume II provides detailed information on the computer programming, including listings and flow charts.

This report is submitted by KCWD in fulfillment of Cooperative Agreement CR 806448-01, under the sponsorship of the U.S. EPA.

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ACKNOWLEDGMENTS

The staff of Kenton County, Kentucky, Water District No. 1 participated in the development and implementation of the Financial Reporting System described in this report. The cooperation and active support of Mr. Malvern Connett, Office Manager, Kenton County, Kentucky, Water District No. 1, and Mr. James Sparrow, CPA, Rankin, Rankin and Company, are gratefully acknowledged.

SECTION 1

INTRODUCTION

The U.S. Environmental Protection Agency (EPA) developed a water supply Cost Analysis System (CAS) using the Kenton County, Kentucky Water District No.1 (KCWD) as a model. The CAS began producing cost accounting reports for KCWD, however KCWD soon realized that there was a need to have a computerized financial reporting system that would be linked to and compatible to the CAS. Therefore, KCWD requested and received assistance from the EPA in the development of a water utility financial reporting system (FRS).

The water supply FRS documentation is presented in two volumes. The background, development, and implementation are described in Volume I. This document, Volume II, contains only the FRS computer operating data format, program flow diagram, and program listings. Volume I must be used for all other information relating to the FRS, including the concept of development and the details of the application at KCWD.

In order for the computer programs to have as much potential as reasonably possible for application at other water utilities, the programming was accomplished using a familiar computer language operating on common hardware. American Standard COBOL, operating in an IBM 370 environment was chosen for the application. The following pages of this volume provide the details of the FRS computer programs.

SECTION 2

FINANCIAL REPORTING SYSTEM COMPUTER OPERATIONS

SYSTEM FLOW DIAGRAMS

Figure 1 represents the overall routine monthly operating flow diagram of the FRS. In general, the FRS takes the source input data, verifies it, and produces reports (trial balance, statement of revenues and expenditures, balance sheet). There are actually sixteen separate modules of programs performing the necessary functions of the analysis; seven modules performing the interface functions. The interface programs receive the input data in various formats, edit the data for validity, and condition the data for entry into the FRS. It is from these interface programs that financial reports are generated for the KCWD's FRS. The interface edit programs perform such functions as verifying the validity of each account number to assure that it is appropriate, and to show whether the source documents are in balance. The figures from the source document are stored in a large matrix from which each element is withdrawn and utilized in various reports. Figure 1 shows the types of information input to the system, the flow and application of that information within the system.

COMPUTER PROGRAM DIRECTORY

The purpose of this directory is to record the location of each program within the Operating Instruction Data Format, Flow Diagrams, and the Program Listings Sections of this report so that each program may be individually analyzed in its entirety.

The programs listed are in the order used to create the system and are not necessarily in their routine operating order. That order is recorded in the Routine Operating Sequence.

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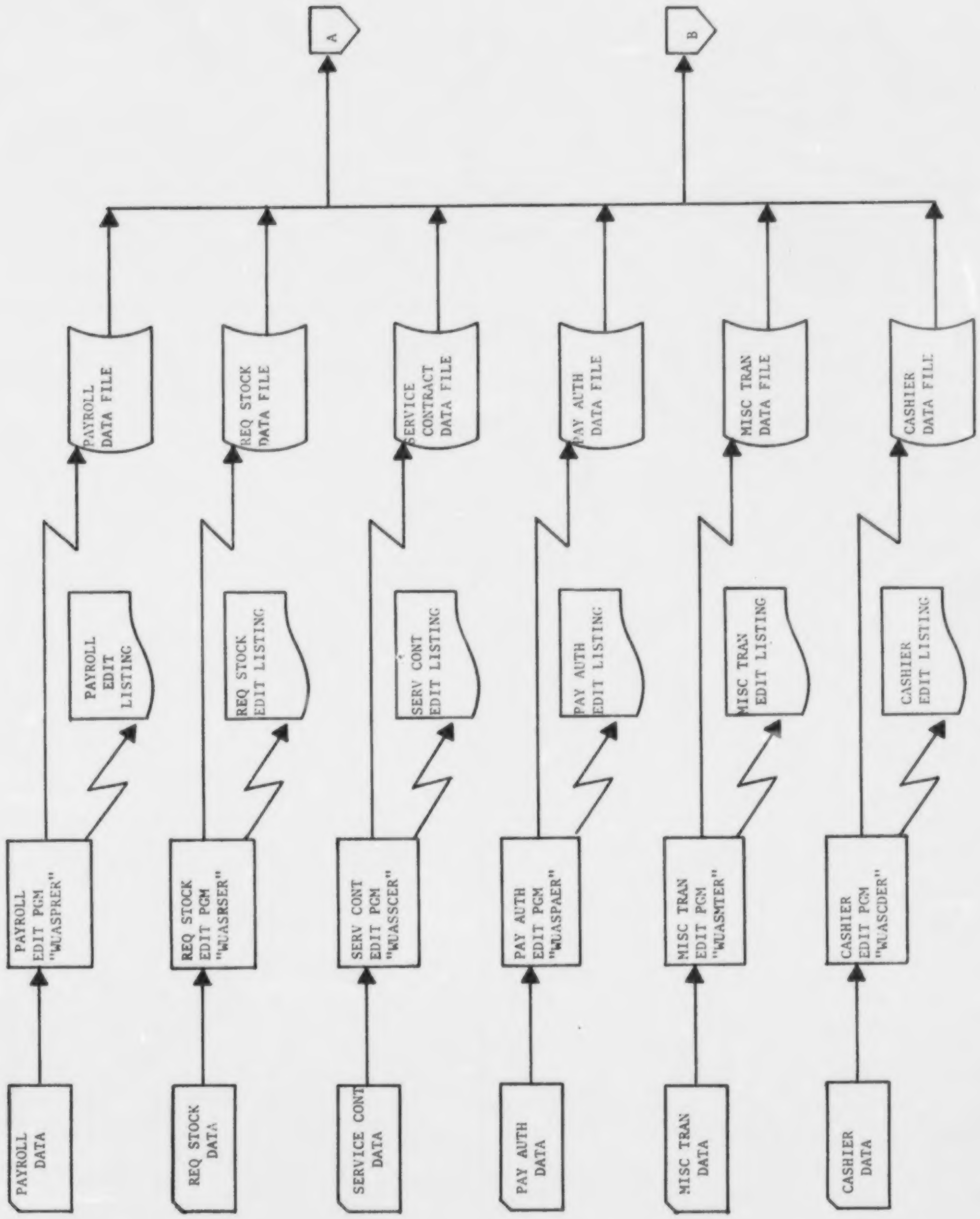
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CASHIER DATA FILE
PAYROLL EDIT LISTING
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SERV CONT EDIT LISTING
PAY AUTH EDIT LISTING
MISC TRAN EDIT LISTING
CASHIER EDIT LISTING
PAYROLL EDIT PGM "WUASPRER"
REQ STOCK EDIT PGM "WUASRSER"
SERV CONT EDIT PGM "WUASSCER"
PAY AUTH EDIT PGM "WUASPAER"
MISC TRAN EDIT PGM "WUASMTER"
CASHIER EDIT PGM "WUASCDER"
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Figure 1 (a). Financial Reporting System general flow diagram.

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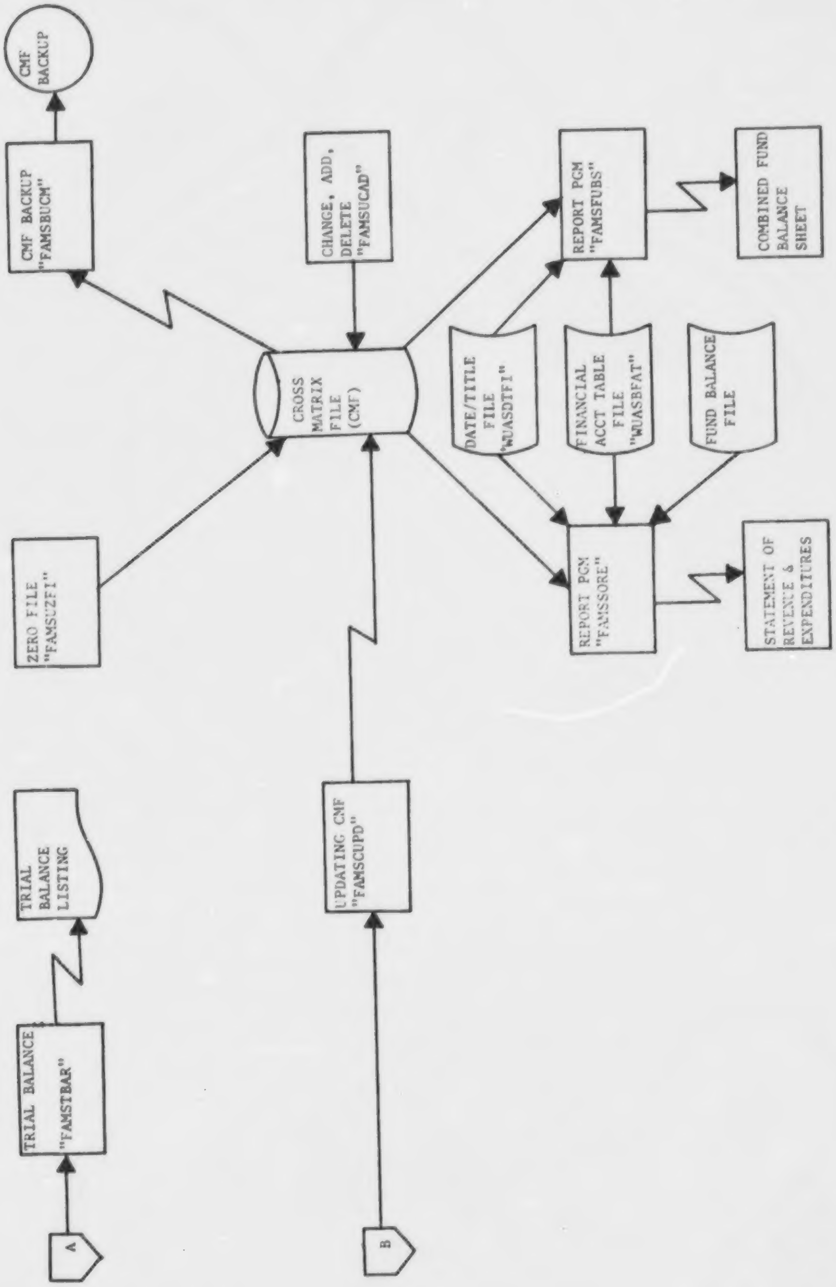
CMF BACKUP
CMF BACKUP "FAMSBUCM"
CHANGE, ADD, DELETE "FAMSUCAD"
REPORT PGM "FAMSFUBS"
COMBINED FUND BALANCE SHEET
CROSS MATRIX FILE (CMF)
DATE/TITLE FILE "WUASDTFI"
FINANCIAL ACCT TABLE FILE "WUASBFAT"
FUND BALANCE FILE
ZERO FILE "FAMSUZFI"
REPORT PGM "FAMSSORE"
STATEMENT OF REVENUE & EXPENDITURES
TRIAL BALANCE LISTING
UPDATING CMF "FAMSCUPD"
TRIAL BALANCE "FAMSTBAR"
A
B

Figure 1 (b). Financial Reporting System general flow diagram.

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	PROGRAM	OPERATING INSTRUCTIONS Page No.	DATA FORMAT Page No.	FILE LAYOUT Page No.	PROGRAM FLOW DIAGRAMS Page No.	PROGRAM LISTINGS Page No.
1.	WUASBFAT	6	28	45	61	93
2.	FAMSBCMF	7	-	46	63	99
3.	WUASSCER	8	29	47	64	105
4.	WUASMTER	9	30	-	66	115
5.	WUASPAER	10	31	-	68	125
6.	WUASRSER	11	32	-	70	134
7.	WUASPRER	12	33	-	72	143
8.	WUASCDER	13	34	-	74	152
9	WUASDTFI	14	35	-	77	160
10.	FAMSTBAR	15	-	-	79	169
11.	FAMSUZFI	16	39	52	82	181
12.	FAMSCUPD	18	-	-	84	185
13.	FAMSSORE	19	-	-	85	189
14.	FAMSFUBS	20	-	-	86	202
15.	FAMSBUCM	21	40	-	88	215
16.	FAMSUCAD	22	41	-	89	220

SYSTEM OPERATING INSTRUCTIONS

The purpose of this part of the report is to provide a general description of each program and give specific keypunching and system operating instructions. All routine listings should normally be printed on one-part paper; however, the number of report copies should be determined by the utility's requirements.

Operating instructions for each program begin with a program definition, and then the instructions are broken down into keypunching and operation instructions.

By following these instructions, the FRS can be operated successfully. If a variation in procedure is encountered, contact the System Programmer.

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"WUASBFAT"

OBJECTIVE: THIS PROGRAM CREATES A FILE THAT IS USED IN BUILDING THE CROSS MATRIX FILE. IN ADDITION, IT IS USED TO VERIFY THE EXISTENCE OF VALID ACCOUNT NUMBERS IN THE FINANCIAL REPORTING SYSTEM. THIS FILE CONTAINS THE ACCOUNT NAME IN TWO (2) 20-CHARACTER FIELDS.

OPERATING INSTRUCTIONS

(A) KEY PUNCH: THE FOLLOWING INPUT DATA ARE REQUIRED: (see section 3)

(1). ONE DATE-TITLE CARD.

(2). DATA USED TO BUILD THE FINANCIAL ACCOUNT TABLE FILE.

(B) OPERATION: PROGRAM OPERATION/INFORMATION IS AS FOLLOWS:

(1). PLACE THE DATE-TITLE CARD FOLLOWED BY THE FINANCIAL DATA BEHIND THE "//SYSIN DD *" CARD IN THE "WUASBFAT" JCL DECK.

(2). PUT THE DECK IN THE CARD READER AND READ THE DECK.

(3). OUTPUT WILL BE ON ONE-PART PAPER LISTING THE FINANCIAL ACCOUNT TABLE FILE.

(4). THIS PROGRAM MAY BE RUN AS MANY TIMES AS REQUIRED.

"FAMSBCMF"

OBJECTIVE: THIS PROGRAM CREATES THE CROSS MATRIX FILE. GENERALLY, THIS PROGRAM SHOULD BE USED ONLY ONCE TO INITIATE THE FILE. HOWEVER, IF THE FILE IS DELETED, THE ORIGINAL FILE CAN BE RECREATED AND UPDATED FROM THE MOST CURRENT BACKUP TAPE USING PROGRAM "FAMSUCAD".

OPERATING INSTRUCTIONS

(A) KEY PUNCH: THE FOLLOWING INPUT DATA ARE REQUIRED: (see section 3)

(1). DATE-TITLE CARD.

(2). REQUIRES NO DATA CARD INPUT.

(B) OPERATION: PROGRAM OPERATION/INFORMATION IS AS FOLLOWS:

(1). PLACE THE DATE-TITLE CARD BEHIND THE "//SYSIN DD *" CARD IN THE "FAMSBCMF" JCL DECK.

(2). PUT THE DECK IN THE CARD READER AND READ THE DECK.

(3). OUTPUT WILL BE ON ONE-PART PAPER.

(4). LISTING WILL SHOW WHAT THE FILE CONTAINS.

(5). THIS PROGRAM CAN BE RUN AS MANY TIMES AS REQUIRED.

"WUASSCER"

OBJECTIVE: THE PURPOSE OF THIS PROGRAM IS TO READ AND EDIT THE SERVICE CONTRACT SOURCE DATA CARDS. THIS PROGRAM BUILDS A DATA FILE USED IN THE FINANCIAL REPORTING SYSTEM.

OPERATING INSTRUCTIONS

(A) KEY PUNCH: THE FOLLOWING INPUT DATA ARE REQUIRED: (see Section 3)

(1). ONE DATE-TITLE CARD.

(2). DATA FROM SERVICE CONTRACT SOURCE DOCUMENTS SHOULD BE PUNCHED AND VERIFIED.

(B) OPERATION: PROGRAM OPERATION/INFORMATION IS AS FOLLOWS:

(1). PLACE DATE-TITLE CARD FOLLOWED BY THE SERVICE CONTRACT DATA BEHIND THE "//SYSIN DD *" CARD IN THE "WUASSCER" JCL DECK.

(2). PUT THE DECK IN THE CARD READER AND READ THE DECK.

(3). OUTPUT WILL BE ON ONE-PART PAPER.

(4). UNDER THE COMMENT COLUMN OF THE LISTING, DESCRIPTIVE COMMENTS WILL BE PRINTED CONCERNING ERROR(S) FOUND IN THE DATA.

(5). IF ANY ERRORS WERE DETECTED, CORRECT THEM AND GO BACK TO (1).

(6). THIS PROGRAM MAY BE RUN AS MANY TIMES AS REQUIRED.

"WUASMTER"

OBJECTIVE: THE PURPOSE OF THIS PROGRAM IS TO READ AND EDIT THE MISCELLANEOUS TRANSACTIONS SOURCE DATA CARDS. THIS PROGRAM BUILDS A DATA FILE USED IN THE FINANCIAL REPORTING SYSTEM.

OPERATING INSTRUCTIONS

(A) KEY PUNCH: THE FOLLOWING INPUT DATA ARE REQUIRED: (see Section 3)

(1). ONE DATE-TITLE CARD.

(2). DATA FROM MISCELLANEOUS TRANSACTIONS SOURCE DOCUMENTS SHOULD BE PUNCHED AND VERIFIED.

(B) OPERATION: PROGRAM OPERATION/INFORMATION IS AS FOLLOWS:

(1). PLACE DATE-TITLE CARD FOLLOWED BY THE MISCELLANEOUS TRANSACTIONS DATA BEHIND THE "//SYSIN DD *" CARD IN THE "WUASMTER" JCL DECK.

(2). PUT THE DECK IN THE CARD READER AND READ THE DECK.

(3). OUTPUT WILL BE ON ONE-PART PAPER.

(4). UNDER THE COMMENT COLUMN OF THE LISTING, DESCRIPTIVE COMMENTS WILL BE PRINTED CONCERNING ERROR(S) FOUND IN THE DATA.

(5). IF ANY ERRORS WERE DETECTED, CORRECT THEM AND GO BACK TO (1).

(6). THIS PROGRAM MAY BE RUN AS MANY TIMES AS REQUIRED.

"WUASPAER"

OBJECTIVE: THE PURPOSE OF THIS PROGRAM IS TO READ AND EDIT THE PAYMENT AUTHORIZATIONS SOURCE DATA CARDS. THIS PROGRAM BUILDS A DATA FILE USED IN THE FINANCIAL REPORTING SYSTEM.

OPERATING INSTRUCTIONS

(A) KEY PUNCH: THE FOLLOWING INPUT DATA ARE REQUIRED: (see Section 3)

(1). ONE DATE-TITLE CARD.

(2). DATA FROM PAYMENT AUTHORIZATION SOURCE DOCUMENTS SHOULD BE PUNCHED AND VERIFIED.

(B) OPERATION: PROGRAM OPERATION/INFORMATION IS AS FOLLOWS:

(1). PLACE DATE-TITLE CARD FOLLOWED BY THE PAYMENT AUTHORIZATION DATA BEHIND THE "//SYSIN DD *" CARD IN THE "WUASPAER" JCL DECK.

(2). PUT THE DECK IN THE CARD READER AND READ THE DECK.

(3). OUTPUT WILL BE ON ONE-PART PAPER.

(4). UNDER THE COMMENT COLUMN OF THE LISTING, DESCRIPTIVE COMMENTS WILL BE PRINTED CONCERNING ERROR(S) FOUND IN THE DATA.

(5). IF ANY ERROR(S) WERE DETECTED, CORRECT THEM AND GO BACK TO (1).

(6). THIS PROGRAM MAY BE RUN AS MANY TIMES AS REQUIRED.

"WUASRSER"

OBJECTIVE: THE PURPOSE OF THIS PROGRAM IS TO READ AND EDIT THE REQUISITION FROM STOCK SOURCE DATA CARDS. THIS PROGRAM BUILDS A DATA FILE USED IN THE FINANCIAL REPORTING SYSTEM.

OPERATING INSTRUCTIONS

(A) KEY PUNCH: THE FOLLOWING INPUT DATA ARE REQUIRED: (see Section 3)

(1). ONE DATE-TITLE CARD.

(2). DATA FROM REQUISITION SOURCE DOCUMENTS SHOULD BE PUNCHED AND VERIFIED.

(B) OPERATION: PROGRAM OPERATION/INFORMATION IS AS FOLLOWS:

(1). PLACE DATE-TITLE CARD FOLLOWED BY THE REQUISITION FROM STOCK DATA BEHIND THE "//SYSIN DD *" CARD IN THE "WUASRSER" JCL DECK.

(2). PUT THE DECK IN THE CARD READER AND READ THE DECK.

(3). OUTPUT WILL BE ON ONE-PART PAPER.

(4). UNDER THE COMMENT COLUMN OF THE LISTING, DESCRIPTIVE COMMENTS WILL BE PRINTED CONCERNING ERROR(S) FOUND IN THE DATA.

(5). IF ANY ERROR(S) WERE DETECTED, CORRECT THEM AND GO BACK TO (1).

(6). THIS PROGRAM MAY BE RUN AS MANY TIMES AS REQUIRED.

"WUASPRER"

OBJECTIVE: THE PURPOSE OF THIS PROGRAM IS TO READ AND EDIT THE PAYROLL SOURCE DATA CARDS. THIS PROGRAM BUILDS A DATA FILE USED IN THE FINANCIAL REPORTING SYSTEM.

OPERATING INSTRUCTIONS

(A) KEY PUNCH: THE FOLLOWING INPUT DATA ARE REQUIRED: (see Section 3)

(1). ONE DATE-TITLE CARD.

(2). DATA FROM PAYROLL SOURCE DOCUMENTS SHOULD BE PUNCHED AND VERIFIED.

(B) OPERATION: PROGRAM OPERATION/INFORMATION IS AS FOLLOWS:

(1). PLACE DATE-TITLE CARD FOLLOWED BY THE PAYROLL DATA BEHIND THE "//SYSIN DD *" CARD IN THE "WUASPRER" JCL DECK.

(2). PUT THE DECK IN THE CARD READER AND READ THE DECK.

(3). OUTPUT WILL BE ON ONE-PART PAPER.

(4). UNDER THE COMMENT COLUMN OF THE LISTING, DESCRIPTIVE COMMENTS WILL BE PRINTED CONCERNING ERROR(S) FOUND IN THE DATA.

(5). IF ANY ERROR(S) WERE DETECTED, CORRECT THEM AND GO BACK TO (1).

(6). THIS PROGRAM MAY BE RUN AS MANY TIMES AS REQUIRED.

"WUASCDER"

OBJECTIVE: THE PURPOSE OF THIS PROGRAM IS TO READ AND EDIT THE CASHIER'S DAILY SOURCE DATA CARDS. THIS PROGRAM BUILDS A DATA FILE USED IN THE FINANCIAL REPORTING SYSTEM.

OPERATING INSTRUCTIONS

(A) KEY PUNCH: THE FOLLOWING INPUT DATA ARE REQUIRED: (see Section 3)

(1). ONE DATE-TITLE CARD.

(2). DATA FROM CASHIER'S DAILY SOURCE DOCUMENTS SHOULD BE PUNCHED AND VERIFIED.

(B) OPERATION: PROGRAM OPERATION/INFORMATION IS AS FOLLOWS:

(1). PLACE DATE-TITLE CARD FOLLOWED BY THE CASHIER'S DAILY DATA BEHIND THE "//SYSIN DD *" CARD IN THE "WUASCDER" JCL DECK.

(2). PUT THE DECK IN THE CARD READER AND READ THE DECK.

(3). OUTPUT WILL BE ON TWO-PART PAPER.

(4). UNDER THE COMMENT COLUMN OF THE LISTING, DESCRIPTIVE COMMENTS WILL BE PRINTED CONCERNING ERROR(S) FOUND IN THE DATA.

(5). IF ANY ERRORS WERE DETECTED, CORRECT THEM AND GO BACK TO (1).

(6). THIS PROGRAM MAY BE RUN AS MANY TIMES AS REQUIRED.

"WUASDTFI"

OBJECTIVE: THE PROGRAM CREATES A DATE-TITLE ON A DISK FILE FOR OUTPUT REPORT HEADINGS.

OPERATING INSTRUCTIONS

(A) KEY PUNCH: THE FOLLOWING INPUT DATA ARE REQUIRED: (see Section 3)

(1). FIRST CARD CONTAINS DATE OR PERIOD.

(2). SECOND CARD CONTAINS TITLE IN TWO PARTS

(3). THIRD AND FOURTH CARDS (used for the Cost Analysis System)

(B) OPERATION: PROGRAM OPERATION/INFORMATION IS AS FOLLOWS:

(1). PLACE INPUT DATA CARDS BEHIND THE "//SYSIN DD *" CARD IN THE "WUASDTFI" JCL DECK.

(2). PUT THE DECK IN THE CARD READER AND READ THE DECK.

(3). OUTPUT WILL BE ON ONE-PART PAPER SHOWING LAYOUT OF WATER FLOW DATA BASE.

(4). THIS PROGRAM MAY BE RUN AS MANY TIMES AS REQUIRED.

"FAMSTBAR"

OBJECTIVE: THIS PROGRAM READS THE INITIAL INPUT FILES AND THE PREVIOUS MONTH'S CROSS MATRIX FILE, THEN PRODUCES A TRIAL BALANCE REPORT. THE PREVIOUS MONTH'S CROSS MATRIX FILE YEAR-TO-DATE DATA IS PRINTED, BY ACCOUNT NUMBER, AS THE CURRENT MONTH'S BEGINNING AMOUNT; THE DATA FROM THE INPUT FILES IS PRINTED AS THE CURRENT MONTH'S CURRENT DATA; THE PREVIOUS MONTH'S YEAR-TO-DATE DATA AND THE CURRENT MONTH'S DATA ARE SUMMED AND PRINTED AS THE CURRENT MONTH'S ENDING (YEAR-TO-DATE) BALANCE.

OPERATING INSTRUCTIONS

(A) KEY PUNCH: THE FOLLOWING INPUT DATA ARE REQUIRED: (see Section 3)

(1). NO INPUT DATA CARD USED.

(B) OPERATION: PROGRAM OPERATION/INFORMATION IS AS FOLLOWS:

(1). PUT THE DECK IN THE CARD READER AND READ THE DECK.

(2). OUTPUT WILL BE ON THREE-PART PAPER SHOWING ACCOUNT DESCRIPTION AND BALANCE: BEGINNING, CURRENT, AND ENDING.

(3). THIS PROGRAM MAY BE RUN AS MANY TIMES AS REQUIRED.

"FAMSUZFI"

OBJECTIVE: THE PURPOSE OF THIS PROGRAM IS TO ADJUST OR ELIMINATE DOLLARS BY ACCOUNT NUMBER IN CERTAIN DATA FIELDS THROUGHOUT THE CROSS MATRIX FILE (CMF). THIS PROGRAM MOVES THE CURRENT PERIOD'S DOLLARS TO THE PREVIOUS PERIOD'S DOLLARS FIELDS AND THEN ZEROS THE CURRENT PERIOD'S DOLLARS FIELD. THE PROGRAM CAN ALSO MAKE OTHER CHANGES TO THE (CMF) BY USING ONE OF THE FOLLOWING OPTION CARDS:

(1) BY INCLUDING A "FISCAL" OPTION CARD, IN ADDITION TO ACCOMPLISHING THE ABOVE ADJUSTMENT, THE CURRENT YEAR-TO-DATE DOLLARS WILL BE MOVED TO THE PREVIOUS YEAR-TO-DATE DOLLARS FIELDS AND THEN THE CURRENT YEAR-TO-DATE DOLLARS FIELDS ARE ZEROED.

(2) BY INCLUDING A "SPECIFIC" OPTION CARD, THE FUNCTION ABOVE (OPTION #1) IS ACCOMPLISHED BY SPECIFIC ACCOUNTS USING THE DATA CARDS THAT FOLLOW THIS OPTION CARD.

(3) BY INCLUDING A "ZERO" OPTION CARD, ALL THE DATA FIELDS WILL BE ZEROED. (SHOULD BE USED NORMALLY FOR INITIAL SYSTEM TESTING PERIOD).

OPERATING INSTRUCTIONS

(A) KEY PUNCH: THE FOLLOWING INPUT DATA ARE REQUIRED. (see Section 3)

(1) NO DATE-TITLE CARD IS NEEDED.

(2) FOR "FISCAL" OPTION--PUNCH THE WORD "FISCAL" IN THE FIRST SEVEN POSITIONS OF THE DATA CARD.

(3) FOR "SPECIFIC" OPTION--PUNCH THE WORD "SPECIFIC" IN THE FIRST EIGHT POSITIONS OF THE DATA CARD. THE SPECIFIC ACCOUNTS THAT ARE TO BE ZEROED ARE PUNCHED IN THE FIRST TEN POSITIONS OF DATA CARDS (ONE ACCOUNT TO A CARD), THEN PLACED BEHIND THE "SPECIFIC" OPTION CARD.

(4) FOR "ZERO" OPTION--PUNCH THE WORD "ZERO" IN THE FIRST FOUR POSITIONS OF THE DATA CARD.

(B) OPERATION: PROGRAM OPERATION/INFORMATION IS AS FOLLOWS:

NOTE: USE CARE WHEN RUNNING THIS JOB, AS FILE COULD BE ERASED IN ERROR. THIS JOB MUST BE RUN PRIOR TO RUNNING THE PROGRAM "FAMSCUPD" WHICH IS THE UPDATE UTILITY PROGRAM.

(1). IF USING AN OPTION CARD, PLACE THE OPTION CARD AFTER THE "//SYSIN DD *" CARD IN THE "FAMSUZFI" JCL DECK.

(2). PUT THE DECK IN THE CARD READER AND READ THE DECK.

(3). OUTPUT WILL BE ON ONE-PART PAPER. ONLY A MESSAGE WILL BE PRINTED STATING WHAT TYPE OF OPTION WAS USED AND IF IT WAS COMPLETED.

(4). DO NOT RERUN THIS JOB...IF JOB SHOULD NOT BE COMPLETED OR THE WRONG OPTION WAS USED, THE FILE WILL HAVE TO BE REBUILT.

"FAMSCUPD"

OBJECTIVE: THIS PROGRAM READS THE MERGED FILE CREATED BY THE PROGRAM "FAMSTBAR", AND UPDATES THE CROSS MATRIX FILE USING THIS DATA.

OPERATING INSTRUCTIONS

(A) KEY PUNCH: THE FOLLOWING INPUT DATA ARE REQUIRED: (see Section 3)

(1). NO INPUT DATA CARD USED.

(B) OPERATION: PROGRAM OPERATION/INFORMATION IS AS FOLLOWS:

NOTE: MAKE SURE PROGRAM "FAMSUZFI" WAS EXECUTED PRIOR TO BEGINNING THIS JOB.

(1). PLACE THE "FAMSCUPD" JCL DECK IN THE CARD READER AND READ THE DECK.

(2). OUTPUT CONSISTS OF A MESSAGE INFORMING THE OPERATOR THAT THE CROSS MATRIX FILE HAS BEEN UPDATED WILL BE ON ONE-PART PAPER.

(3). DO NOT RERUN THIS JOB. IF JOB ABORTS, CONTACT PROGRAMMER OR DATA BASE MANAGER BEFORE ATTEMPTING FURTHER ACTION.

"FAMSSORE"

OBJECTIVE: THIS PROGRAM READS THE CROSS MATRIX FILE AND PRODUCES A STATEMENT OF REVENUE AND EXPENDITURES REPORT.

OPERATING INSTRUCTIONS

(A) KEY PUNCH: THE FOLLOWING INPUT DATA ARE REQUIRED: (see Section 3)

(1). NO INPUT DATA CARD USED.

(B) OPERATION: PROGRAM OPERATION/INFORMATION IS AS FOLLOWS:

(1). PUT THE DECK IN THE CARD READER AND READ THE DECK.

(2). OUTPUT WILL BE ON THREE-PART PAPER LISTING THE STATEMENT OF REVENUES AND EXPENDITURES.

(3). THIS PROGRAM MAY BE RUN AS MANY TIMES AS REQUIRED.

"FAMSFUBS"

OBJECTIVE: THIS PROGRAM READS THE CROSS MATRIX FILE, ACCUMULATES DATA WITHIN EACH FUND ACCOUNT, AND PRODUCES A BALANCE SHEET REPORT.

OPERATING INSTRUCTIONS

(A) KEY PUNCH: THE FOLLOWING INPUT DATA ARE REQUIRED: (see Section 3)

(1). NO INPUT DATA CARD USED.

(B) OPERATION: PROGRAM OPERATION/INFORMATION IS AS FOLLOWS:

(1). PUT THE DECK IN THE CARD READER AND READ THE DECK.

(2). OUTPUT WILL BE ON THREE-PART PAPER LISTING THE COMBINED FUND BALANCE.

(3). THIS PROGRAM MAY BE RUN AS MANY TIMES AS REQUIRED.

"FAMSBUCM"

OBJECTIVE: THIS PROGRAM IS USED TO LIST AND/OR BACK UP THE CROSS MATRIX FILE (CMF) ONTO A TAPE FILE. THE PROGRAM WILL NORMALLY PRODUCE A LISTING OF THE DATA ON THE CMF, HOWEVER, BY INSERTING AN OPTION CARD THE FILE WILL BE ALSO BACKED UP ON TAPE.

OPERATING INSTRUCTIONS

(A) KEY PUNCH: THE FOLLOWING INPUT DATA ARE REQUIRED: (see Section 3)

(1). ONE DATE-TITLE CARD.

(2). ONE OPTION CARD CONTAINING THE WORD "BACK-UP" IN THE FIRST SEVEN POSITIONS OF THE CARD IF ACTUAL BACK-UP IS TO TAKE PLACE. OTHERWISE, NO OPTION CARD REQUIRED.

(B) OPERATION: PROGRAM OPERATION/INFORMATION IS AS FOLLOWS:

(1). PLACE THE DATE-TITLE CARD FOLLOWING THE "//SYSIN DD *" CARD IN THE "FAMSBUCM" JCL DECK.

(2). OPTION: IF CROSS MATRIX FILE IS TO BE BACKED UP ON TAPE THEN PLACE THE OPTION CARD AFTER THE DATE-TITLE CARD.

(3). PUT THE DECK IN THE CARD READER AND READ THE DECK.

(4). OUTPUT WILL BE ON ONE-PART PAPER.

(5). THIS PROGRAM MAY BE RUN AS MANY TIMES AS REQUIRED.

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"FAMSUCAD"

OBJECTIVE: THIS PROGRAM IS USED FOR MAKING CHANGES, ADDITIONS, AND/OR DELETIONS TO RECORDS IN THE CROSS MATRIX FILE (CMF). IN ADDITION, THE (CMF) MAY BE RE-CREATED FROM A (CMF) BACKUP TAPE.

OPERATING INSTRUCTIONS

(A) KEY PUNCH: THE FOLLOWING INPUT DATA ARE REQUIRED: (see Section 3)

(1). ONE DATE-TITLE CARD.

(2). ONE OPTION CARD WITH THE WORD '****UPDATE' IN THE FIRST 10 POSITIONS OF THE CARD.

(3). DATA FOR MAKING CHANGES, ADDITIONS, AND/OR DELETIONS. DATA RECORDS (CARDS) MUST BE IN THE EXACT IMAGE OF THE CROSS MATRIX FILE RECORDS.

(B) OPERATION: PROGRAM OPERATION/INFORMATION IS AS FOLLOWS:

NOTE: BY LEAVING OUT THE '****UPDATE' CARD, THE FILE WILL NOT BE PHYSICALLY CHANGED. ONLY A SIMULATION OF UPDATING WILL TAKE PLACE. THIS WILL ALLOW FOR A TEST RUN ON LARGE AMOUNTS OF DATA TO REVIEW CHANGES.

THERE ARE TWO (2) DIFFERENT OPERATING PROCEDURES AVAILABLE TO BE USED IN THIS PROGRAM, AS DESCRIBED BELOW.

(1) CHANGING, ADDING, DELETING PROCEDURE.

IN ORDER TO CHANGE A RECORD, THE MATCH CODE, FUND NUMBER,

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9-1/8"
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DROPPED HEAD; BEGIN SECTIONS HERE

AND ACCOUNT TYPE FIELDS MUST BE IDENTICAL TO THOSE OF THE RECORD BEING CHANGED. ADDITIONALLY, ACCOUNT NUMBER MUST BE FOUND IN THE CROSS MATRIX FILE. IF THESE KEY FIELDS ARE INVALID OR CANNOT BE LOCATED WITHIN THE CROSS MATRIX FILE, THE CHANGE WILL BE CONSIDERED A NEW RECORD AND WILL BE ADDED TO THE EXISTING FILE. EACH AMOUNT FIELD MUST CONTAIN A VALUE, OTHERWISE, IF LEFT BLANK, THE FIELD WILL BE ZEROED.

6-1/2"

IN ORDER TO ADD A NEW RECORD, THE ACCOUNT NUMBER, FUND NUMBER, ACCOUNT TYPE, AND AMOUNT FIELDS MUST BE COMPLETED. THE AMOUNT FIELDS SHOULD CONTAIN WHATEVER VALUES ARE REQUIRED. IN ADDITION, THE NEW RECORD MUST INCLUDE A UNIQUE MATCH CODE IN ORDER TO POSITION THE INFORMATION WITHIN THE OUTPUT REPORTS.

IN ORDER TO DELETE AN EXISTING RECORD, THE ACCOUNT NUMBER FIELD MUST BE IDENTICAL TO THOSE OF THE RECORD BEING DELETED. ALL OTHER FIELDS MUST BE BLANK.

TO OPERATE THE CHANGE, ADD, OR DELETE PROGRAM:

(a) PLACE THE DATE-TITLE AND THEN THE OPTION CARD, IF USED, FOLLOWED BY THE DATA CARDS BEHIND THE "//SYSIN DD *" CARD IN THE "FAMSUCAD" JCL DECK.

(b) PUT THE DECK IN THE CARD READER AND READ THE DECK.

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TOP OF IMAGE AREA
DROPPED HEAD BEGIN SECTIONS HERE

(c) OUTPUT WILL BE ON ONE-PART PAPER LISTING ALL CHANGES, ADDS, OR DELETES. A COMMENT WILL STATE WHAT ACTION WAS TAKEN FOR EACH RECORD (i.e. RECORD CHANGED, ADDED, OR DELETED). IN ADDITION AT THE END OF THE LISTING, A TOTAL OF ALL CHANGES WILL BE PRINTED.

(d) THIS JOB CAN BE RERUN, BUT USE CARE AS THE CROSS MATRIX FILE CAN BE DRASTICALLY CHANGED.

6-1/2"

(2) THE PROCEDURE FOR RECREATING THE (CMF) FROM (CMF) BACKUP TAPE. NO DATA CARDS ARE USED IN THIS PROGRAM--ONLY THE DATE-TITLE, OPTION CARD, AND THE (CMF) BACKUP FILE. TO OPERATE THE RECREATING PROGRAM:

(a). PLACE THE DATE-TITLE CARD FOLLOWED BY THE OPTION CARD BEHIND THE "//SYSIN DD *" CARD IN THE "FAMSUCAD" JCL DECK.

(b) PUT THE DECK IN THE CARD READER AND READ THE DECK.

(c) OUTPUT WILL BE ON ONE-PART PAPER, LISTING ALL THE RECORDS THAT WERE RECREATED.

(d) THIS JOB CAN BE RERUN IF REQUIRED.

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ROUTINE OPERATING SEQUENCE

The following routine operating sequence should normally be followed unless otherwise stated in the Special Operating Instructions. In operating the FRS, as well as the Cost Analysis System, it is important to note that each program instruction must be understood and that certain procedures be completed prior to performing the subsequent operational functions.

A. INITIAL EDITS: WUASPRER (Payroll), WUASRSER (Requisition from Stock), WUASPAER (Payment Authorization), WUASSCER (Service Contract), WUASMTER (Miscellaneous Transactions), and WUASCDER (Cashier's Daily).

Special Instructions

(1) All edit programs must be run even if current data is not supplied.

(2) The edit programs may be run in any order.

B. UPDATING COST MATRIX FILE: FAMSUZFI (Zero File) and FAMSCUPD (Update File).

Special Instructions

(1) Each program must be run in the order listed.

(2) Do not re-run these programs without consulting with systems programmer.

C. PRINT OUTPUT REPORTS: FAMSTBAR (Trial Balance), FAMSSORE (Statement of Revenue and Expenditures), FAMSFUBS (Balance Sheet).

Special Instructions

(1) The "SORE" program produces a Statement of Revenue and Expenditures for each FRS utility.

(2) The "FUBS" program produces a Fund Balance Sheet for each FRS utility.

(3) These programs may be run as many times as needed, but the "SORE" and "FUBS" programs must be run together.

D. BACK-UP COST MATRIX FILE: FAMSBUCM (Back-up file).

Special Instructions

(1) Program may be run as many times as required.

(2) To produce a current listing of the Cost Matrix File only, run program FAMSBUCM without "back-up" option card.

(3) To back-up the Cost Matrix File and to produce a listing, run program FAMSBUCM with "back-up" option card.

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SECTION 3

DATA FORMAT

KEYPUNCHING SOURCE DATA

The keypunch format is provided to describe the card image layout of all input data. This keypunch format should be used by the keypunch operator in setting-up drum cards and entering the data on an 80-column card. Any variation in these formats should be discussed with the System Programmer.

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9-1/8"
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PUNCHING OR VERIFICATION INSTRUCTIONS

SHEET NO. 1 OF 1

NAME WUASBFAT

PROGRAM CARD NO. ____

TYPE OF CARDS 80 COLUMN

SOURCE DOCUMENT FINANCIAL ACC. TABLE INPUT SHEET

SOURCE ____ DEPT. ____ JOB NO. ____

FIELD #	FIELD LVL	FIELD NAME	COLS BGN	COLS END	# OF COLS	TYPE N	TYPE A	JUS.	VER.	REMARKS AND INSTRUCTIONS
	1	ACCOUNT NO.	1	10	10	X	X	LJ		
		BLANK	11	11	1					
	2	ACCOUNT NAME 1	12	31	20	X	X	LJ		ACCOUNT NO. DESCRIPTION 1
		BLANK	32	32	1					
	3	ACCOUNT NAME 2	33	52	20	X	X	LJ		ACCOUNT NO. DESCRIPTION 2
		BLANK	53	53	1					
	4	FUND TITLE NO.	54	55	2	X	X			FUND TITLE NO. (1 - 10)
		BLANK	56	56	1					
	5	GENERAL ACCT. NO.	57	58	2	X	X			GENERAL ACCOUNT NO. (11 - 99)
		BLANK	59	59	1					
	6	ACCT. NO. INTERNAL	60	63	4	X	X			INTERNAL ACCT. NO.
		BLANK	64	80	17					

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PUNCHING OR VERIFICATION INSTRUCTIONS

NAME WUASSCER
PROGRAM CARD NO.
TYPE OF CARDS 80 COLUMN

SHEET NO. 1 OF 1
SOURCE DOCUMENT SERVICE CONTRACT
SOURCE DEPT. JOB NO.

FIELD #	FIELD LVL	FIELD NAME	COLS BGN	COLS END	# OF COLS	TYPE N	TYPE A	JUS.	VER.	REMARKS AND INSTRUCTIONS
	1	SOURCE CODE	1	1	1	X				MUST BE A '3'
		BLANK	2	2	1					
	2	UTILITY CODE	3	3	1		X			BLANK=KENTON, "C"=COVINGTON
		BLANK	4	4	1					
	3	CONTRACT NO.	5	8	4	X		RJ		
	4	MATERIAL COST	9	16	8	X		RJ		PIC 9(8)V99
	5	LABOR COST	17	24	8	X		RJ		PIC 9(8)V99
	6	TRACTOR COST	25	32	8	X		RJ		PIC 9(8)V99
	7	COMPRESSOR COST	33	40	8	X		RJ		PIC 9(8)V99
	8	TRUCK(S) COST	41	48	8	X		RJ		PIC 9(8)V99
	9	OTHER COST	49	56	8	X		RJ		PIC 9(8)V99
	10	OVERHEAD COST	57	64	8	X		RJ		PIC 9(8)V99
	11	BALANCE	65	72	8	X		RJ		PIC 9(8)V99
		BLANK	73	80	8					

PUNCHING OR VERIFICATION INSTRUCTIONS

NAME WUASMTER
SHEET NO. 1 OF 1
PROGRAM CARD NO.
SOURCE DOCUMENT MISCELLANEOUS TRANSACTIONS
TYPE OF CARDS 80 COLUMN
SOURCE
DEPT.
JOB NO.

FIELD		FIELD NAME	COLS		# OF COLS	TYPE		JUS.	VER.	REMARKS AND INSTRUCTIONS
#	LVL		BGN	END		N	A			
	1	SOURCE CODE	1	1	1	X				MUST BE A '5'
		BLANK	2	2	1					
	2	ENTRY NO.	3	5	3	X		RJ		PIC 9(3)
		BLANK	6	6	1					
	3	ACCOUNT NO.	7	16	10	X	X	LJ		PIC X(10)
		BLANK	17	17	1					
	4	COST CENTER	18	21	4	X		RJ		PIC 9(4)
		BLANK	22	22	1					
	5	AMOUNT	23	32	10	X		RJ		PIC 9(8)V99
		BLANK	33	80	48					

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PUNCHING OR VERIFICATION INSTRUCTIONS

NAME WUASPAER
SHEET NO. 1 OF 1
PROGRAM CARD NO.
SOURCE DOCUMENT PAYMENT AUTHORIZATIONS
TYPE OF CARDS 80 COLUMN
SOURCE
DEPT.
JOB NO.

FIELD #	FIELD LVL	FIELD NAME	COLS BGN	COLS END	# OF COLS	TYPE N	TYPE A	JUS.	VER.	REMARKS AND INSTRUCTIONS
	1	SOURCE CODE	1	1	1	X				MUST BE A '4'
		BLANK	2	2	1					
	2	AUTHORIZATION NO.	3	12	10	X		RJ		PIC 9(10)
		BLANK	13	13	1					
	3	ACCOUNT NO.	14	23	10	X	X	LJ		PIC X(10)
		BLANK	24	24	1					
	4	COST CENTER	25	28	4	X		RJ		PIC 9(4)
		BLANK	29	29	1					
	5	AMOUNT	30	39	10	X		RJ		PIC 9(8)V99
		BLANK	40	40	1					
	6	TOTAL	41	50	10	X		RJ		PIC 9(8)V99
		BLANK	51	80	30					

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FOR TABLES AND ILLUSTRATIONS
PAGE NUMBER

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PUNCHING OR VERIFICATION INSTRUCTIONS

NAME WUASRSER

PROGRAM CARD NO.

TYPE OF CARDS 80 COLUMN

SHEET NO. 1 OF 1

SOURCE DOCUMENT REQUISITION FROM STOCK

SOURCE ______ DEPT. ______ JOB NO. ______

FIELD #	FIELD LVL	FIELD NAME	COLS BGN	COLS END	# OF COLS	TYPE N	TYPE A	JUS.	VER.	REMARKS AND INSTRUCTIONS
	1	SOURCE CODE	1	1	1	X				MUST BE A '2'
		BLANK	2	2	1					
	2	REQUISITION NO.	3	12	10	X		RJ		PIC 9(10)
		BLANK	13	13	1					
	3	ACCOUNT NUMBER	14	23	10	X	X	LJ		PIC X(10)
		BLANK	24	24	1					
	4	COST CENTER	25	28	4	X		RJ		PIC 9(4)
		BLANK	29	29	1					
	5	AMOUNT	30	39	10	X		RJ		PIC 9(8)V99
		BLANK	40	40	1					
	6	TOTAL	41	50	10	X		RJ		PIC 9(8)V99
		BLANK	51	80	30					

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PUNCHING OR VERIFICATION INSTRUCTIONS

NAME WUASPRER
SHEET NO. 1 OF 1
PROGRAM CARD NO. ________
SOURCE DOCUMENT PAYROLL
TYPE OF CARDS 80 COLUMN
SOURCE ________ DEPT. ________ JOB NO. ________

FIELD #	FIELD LVL	FIELD NAME	COLS BGN	COLS END	# OF COLS	TYPE N	TYPE A	JUS.	VER.	REMARKS AND INSTRUCTIONS
	1	SOURCE CODE	1	1	1	X				MUST BE A '1'
		BLANK	2	2	1					
	2	EMPLOYEE NUMBER	3	11	9	X				SOCIAL SECURITY NUMBER
		BLANK	12	12	1					
	3	DATE	13	18	6	X				DDMMYY
		BLANK	19	19	1					
	4	ACCOUNT NO.	20	29	10	X	X	LJ		PIC X(10)
		BLANK	30	30	1					
	5	COST CENTER	31	34	4	X		RJ		PIC 9(4)
		BLANK	35	35	1					
	6	TOTAL PAY	36	45	10	X		RJ		PIC 9(8)V99
		BLANK	46	46	1					
	7	GROSS PAY	47	56	10	X		RJ		PIC 9(8)V99
		BLANK	57	80	24					

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PUNCHING OR VERIFICATION INSTRUCTIONS

NAME WUASCDER
SHEET NO. 1 **OF** 1
PROGRAM CARD NO.
SOURCE DOCUMENT CASHIERS DAILY
TYPE OF CARDS 80 column
SOURCE **DEPT.** **JOB NO.**

FIELD		FIELD NAME	COLS		# OF COLS	TYPE		JUS.	VER.	REMARKS AND INSTRUCTIONS
#	LVL		BGN	END		N	A			
		SOURCE CODE	1	1	1	x				MUST BE A "7"
		BLANK	2	2	1		x			
		INPUT FORM NUMBER	3	8	6	x				
		BLANK	9	9	1		x			
		INPUT FORM NUMBER	10	14	5	x		L		
		BLANK	15	15	1		x			
		FORM SECTION NUMBER	16	16	1		x			
		BLANK	17	17	1		x			
		ACCOUNT NUMBER	18	27	10		x			
		BLANK	28	28	1		x			
		SUB UTILITY CODE OVERRIDE	29	29	1		x			
		BLANK	30	30	1		x			
		AMOUNT	31	40	10	x			R	
		BLANK	41	41	1		x			
		DESC FIELD	42	71	30		x			
		BLANK	72	80	9					

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PUNCHING OR VERIFICATION INSTRUCTIONS

SHEET NO. 1 OF 3

NAME WUASDTFI

PROGRAM CARD NO.

TYPE OF CARDS 80 COLUMN

SOURCE DOCUMENT DATE TITLE

SOURCE DEPT. JOB NO.

FIRST CARD

FIELD #	FIELD LVL	FIELD NAME	COLS BGN	COLS END	# OF COLS	TYPE N	TYPE A	JUS.	VER.	REMARKS AND INSTRUCTIONS
		CARD SEQUENCE	1	1	1	x				
		CURRENT DATE	3	20	18					
		CURRENT MONTH	22	23	2					
		BEGINNING DATE	25	42	18					
		REPORT PERIOD ALPHA	44	50	7					
		REPORT PERIOD NUMERIC	52	53	2					
		CONVERSION FACTOR	55	57	3					
		NO. OF ZONES	59	60	2					
		TYPE OF SYSTEM	62	63	2					
		UTILITY CODE	65	66	2					
		NO. OF SUBUTILITIES	79	80	2					

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PUNCHING OR VERIFICATION INSTRUCTIONS

SHEET NO. 2 OF 3

NAME WUASDTFI

PROGRAM CARD NO.

TYPE OF CARDS 80 column

SOURCE DOCUMENT DATE TITLE

SOURCE DEPT. JOB NO.

SECOND CARD

FIELD #	FIELD LVL	FIELD NAME	COLS BGN	COLS END	# OF COLS	TYPE N	TYPE A	JUS.	VER.	REMARKS AND INSTRUCTIONS
		TITLE - 2	3	26	24					
		TITLE - 2	28	51	24					
		UTILITY-CODE-1	79	80	2					

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PUNCHING OR VERIFICATION INSTRUCTIONS

NAME WUASDTFI

SHEET NO. 3 **OF** 3

PROGRAM CARD NO. ______

SOURCE DOCUMENT DATE TITLE

TYPE OF CARDS 80 column

SOURCE ______ **DEPT.** ______ **JOB NO.** ______

THIRD AND FOURTH CARDS

FIELD		FIELD NAME	COLS		# OF COLS	TYPE		JUS.	VER.	REMARKS AND INSTRUCTIONS
#	LVL		BGN	END		N	A			
		WATER FLOW MG	11	20	10					(occurs 7 times)

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PUNCHING OR VERIFICATION INSTRUCTIONS

NAME DATE-TITLE CARD
PROGRAM CARD NO. ________
TYPE OF CARDS 80 COLUMN
SHEET NO. 1 OF 1
SOURCE DOCUMENT STANDARD DATE-TITLE CARD
SOURCE ________ DEPT. ________ JOB NO. ________

FIELD NO.	FIELD NAME	COLUMNS		NO. OF COLUMNS	TYPE		JUS.	VER.	REMARKS AND INSTRUCTIONS
		FROM	THRU		N	A			
1	DATE	1	18	18	X	X	LJ		MONTH DD, YYYY
2	TITLE	19	42	24	X	X	CEN		UTILITY NAME
	BLANK	43	80	38					

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AND ILLUSTRATIONS
PAGE NUMBER
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OPTION CARD

PUNCHING OR VERIFICATION INSTRUCTIONS

SHEET NO. 1 OF 1

NAME FAMSUZFI

PROGRAM CARD NO.

SOURCE DOCUMENT OPTION FOR ZEROING CM FILE

TYPE OF CARDS 80 COLUMN

SOURCE DEPT. JOB NO.

FIELD NO.	FIELD NAME	COLUMNS FROM	COLUMNS THRU	NO. OF COLUMNS	TYPE N	TYPE A	JUS.	VER.	REMARKS AND INSTRUCTIONS
1	OPTION	1	6	6		X	LJ		OPTIONS = 'FISCAL"
	BLANK	7	80	74					= 'ZERO"

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FOR TABLES AND ILLUSTRATIONS

PAGE NUMBER

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PUNCHING OR VERIFICATION INSTRUCTIONS

SHEET NO. 1 OF 1

NAME FAMSBUCM

PROGRAM CARD NO.

TYPE OF CARDS 80 column

SOURCE DOCUMENT

SOURCE DEPT. JOB NO.

FIELD #	FIELD LVL	FIELD NAME	COLS BGN	COLS END	# OF COLS	TYPE N	TYPE A	JUS.	VER.	REMARKS AND INSTRUCTIONS
										(BACK-UP OPTION COLUMNS 1-7)
		DATE	1	18	18					
		TITLE	19	42	24					

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PUNCHING OR VERIFICATION INSTRUCTIONS

NAME FAMSUCAD

SHEET NO. 1 OF 3

PROGRAM CARD NO.

SOURCE DOCUMENT

TYPE OF CARDS 80 columns

SOURCE

DEPT.

JOB NO.

FIELD		FIELD NAME	COLS		# OF COLS	TYPE		JUS.	VER.	REMARKS AND INSTRUCTIONS
#	LVL		BGN	END		N	A			
		DATE	1	18	18					
		TITLE	19	42	24					

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FOR TABLES AND ILLUSTRATIONS
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PUNCHING OR VERIFICATION INSTRUCTIONS

NAME FAMSUCAD

SHEET NO. 2 OF 3

PROGRAM CARD NO. ____

SOURCE DOCUMENT ____

TYPE OF CARDS 80 column

SOURCE ____ DEPT. ____ JOB NO. ____

FIELD #	FIELD LVL	FIELD NAME	COLS BGN	COLS END	# OF COLS	TYPE N	TYPE A	JUS.	VER.	REMARKS AND INSTRUCTIONS
		MATCH CODE	1	4	4		x			
		ACCOUNT	5	14	10		x			
		FUND NUMBER	15	16	2		x			
		ACCT TYPE	17	18	2		x			
		AMOUNTS	21	80	60		x			

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PUNCHING OR VERIFICATION INSTRUCTIONS

NAME FAMSUCAD
SHEET NO. 3 OF 3
PROGRAM CARD NO.
SOURCE DOCUMENT
TYPE OF CARDS 80 column
SOURCE DEPT. JOB NO.

FIELD #	FIELD LVL	FIELD NAME	COLS BGN	COLS END	# OF COLS	TYPE N	TYPE A	JUS.	VER.	REMARKS AND INSTRUCTIONS
		CURRENT COST	21	30	10					
		PREV MONTH COST	31	40	10					
		CUR COST YTD	41	50	10					
		BUDGET AMOUNT	51	60	10					
		PREV YEAR COST	61	70	10					
		NOT USED	71	80	10					

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TYPING GUIDE SHEET

SYSTEM FILE LAYOUT

The system file layout is provided to illustrate each financial reporting system program files.

EPA-287 (Cin.)
(4-76)

FILE LAYOUT FORMAT

NAME	WUASBFAT FINANCIAL ACCOUNT TABLE FILE	**SHEET NO.**	1 **OF** 1
FILE RECORD NO.	1	**RECORD LENGTH**	58
TYPE OF FILE	INDEXED SEQUENTIAL	**SOURCE**	FINANCIAL ACCOUNT INPUT DESCRIPTION SHEET

FIELD NO	FIELD NAME	COLUMNS FROM	COLUMNS THRU	NO. OF COLUMNS	TYPE N	TYPE A	JUS	VER	REMARKS AND INSTRUCTIONS
1	ACCOUNT NO.	1	10	10	X	X			KEY FIELD
2	ACCOUNT NAME 1	11	30	20	X	X			
3	ACCOUNT NAME 2	31	50	20	X	X			
4	FUND TITLE	51	52	2	X				
5	GENERAL ACCT.	53	54	2	X				
6	ACCOUNT NO. INTERNAL	55	58	4	X				

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TYPING GUIDE SHEET
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TOP OF

FILE LAYOUT FORMAT

FAMSBCMF
NAME CROSS MATRIX FILE (CMF) **SHEET NO.** 1 **OF** 3

FILE RECORD NO. ______ **RECORD LENGTH** 80

TYPE OF FILE INDEXED SEQUENTIAL **SOURCE** ______

FIELD NO	**FIELD NAME**	**COLUMNS FROM**	**COLUMNS THRU**	**NO. OF COLUMNS**	**TYPE N**	**TYPE A**	**JUS**	**VER**	**REMARKS AND INSTRUCTIONS**
	MATCH CODE	1	4	4	X				
	ACCT NUMBER	5	14	10	X				
	FUND NUMBER	15	16	2	X				
	ACCT TYPE	17	18	2	X				
	FILLER	19	20	2		X			
	CURRENT COST	21	30	10	X				
	PREV. MONTH COST	31	40	10	X				
	CUR COST (YTD)	41	50	10	X				
	BUDGET AMOUNT	51	60	10	X				
	PREV YEAR COST	61	70	10	X				
	NOT USED	71	80	10		X			

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FOR TABLES AND ILLUSTRATIONS
PAGE NUMBER
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FILE LAYOUT FORMAT

NAME FAMSBCMF FINANCIAL ACCOUNT TABLE FILE SHEET NO. 2 OF 3

FILE RECORD NO. ________ RECORD LENGTH 58

TYPE OF FILE INDEXED SEQUENTIAL SOURCE ________

FIELD NO	FIELD NAME	COLUMNS FROM	COLUMNS THRU	NO. OF COLUMNS	TYPE N	TYPE A	JUS	VER	REMARKS AND INSTRUCTIONS
	ACCOUNT NUMBER	1	10						
	ACCOUNT NAME	11	50						
	FUND NUMBER	51	52						
	ACCOUNT TYPE	53	54						
	MATCH CODE	55	58						

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TYPING GUIDE SHEET

FILE LAYOUT FORMAT

NAME FAMSBCMF SPECIAL ACCT FUND ACCTS

SHEET NO. 3 OF 3

FILE RECORD NO.

RECORD LENGTH FUND ACCTS VARIABLE DEPENDING ON NUMBER OF RECORDS (1-99)

TYPE OF FILE SEQUENTIAL

SOURCE

FIELD NO	FIELD NAME	COLUMNS FROM	COLUMNS THRU	NO. OF COLUMNS	TYPE N	TYPE A	JUS	VER	REMARKS AND INSTRUCTIONS
	NUMBER OF RECS	1	4						
	FILLER	5	22						
	FUND ACCTS								
	FUND ACCT NUM	23	24						
	FUND ACCT NAME	25	44						

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EPA-287 (Cin.)
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FILE LAYOUT FORMAT

NAME EDIT FILES *

SHEET NO. 1 **OF** 3

FILE RECORD NO. 1

RECORD LENGTH 26

TYPE OF FILE SEQUENTIAL

SOURCE PAYROLL, PAY AUTH, REQ STOCK, SERVICE CONTRACT, DEPRECIATION, MISC. TRANS.

FIELD NO	FIELD NAME	COLUMNS		NO. OF COLUMNS	TYPE		JUS	VER	REMARKS AND INSTRUCTIONS
		FROM	THRU		N	A			
	BLANK	1	1	1					
1	SORT SEQUENCE	2	2	1	X				IS LEFT BLANK
2	DATE	3	26	24	X	X			DATE FROM INPUT

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FOR TABLES AND ILLUSTRATIONS
PAGE NUMBER

TYPING GUIDE SHEET
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FILE LAYOUT FORMAT

NAME EDIT FILES

SHEET NO. 2 **OF** 3

FILE RECORD NO. 2

RECORD LENGTH 26

TYPE OF FILE SEQUENTIAL

SOURCE

FIELD NO	FIELD NAME	COLUMNS FROM	COLUMNS THRU	NO. OF COLUMNS	TYPE N	TYPE A	JUS	VER	REMARKS AND INSTRUCTIONS
	BLANK	1	1	1					
1	SORT SEQUENCE	2	2	1	X				IS THE SOURCE CODE FROM INPUT
2	TITLE	3	26	24	X	X			IS THE UTILITY NAME

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AND ILLUSTRATIONS
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FILE LAYOUT FORMAT

NAME EDIT FILES

SHEET NO. 3 **OF** 3

FILE RECORD NO. (DATA) 3

RECORD LENGTH 26

TYPE OF FILE SEQUENTIAL

SOURCE 26

FIELD NO	FIELD NAME	COLUMNS FROM	COLUMNS THRU	NO. OF COLUMNS	TYPE N	TYPE A	JUS	VER	REMARKS AND INSTRUCTIONS
1	ACCOUNT NO.	1	10	10	X	X			
2	COST CENTER	11	14	4	X				
3	COST CATEGORY	15	16	2	X				
4	AMOUNT	17	26	10	X				

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FILE LAYOUT FORMAT

NAME DATE-TITLE-FILE

SHEET NO. 1 OF 1

FILE RECORD NO.

RECORD LENGTH 80

TYPE OF FILE SEQUENTIAL

SOURCE

FIELD NO	FIELD NAME	COLUMNS FROM	COLUMNS THRU	NO. OF COLUMNS	TYPE N	TYPE A	JUS	VER	REMARKS AND INSTRUCTIONS
	CURRENT DATE	1	18	18		X			
	CURRENT MONTH	19	20	2	X				
	BEGINNING DATE	21	38	18		X			
	REPT PER ALPHA	39	45	7		X			
	REPT PER NUMERIC	46	47	2	X				
	CONV FACTOR	48	50	3	X				
	NO OF ZONES	51	52	2	X				
	TYPE OF SYSTEM	53	54	2	X				
	UTILITY CODE	55	56	2		X			
	NO OF UTIL	57	58	2	X				
	TITLE-1	59	82	24					
	TITLE-2	83	106	24					
	TREATED WATER	107	116	10					(occurs 7 times)
	BILLED WATER	117	126	10					(occurs 7 times)
	YTD WATER	127	136	10					(occurs 7 times)

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FILE LAYOUT FORMAT

NAME FINANCIAL ACCT TABFI

SHEET NO. 1 OF 3

FILE RECORD NO.

RECORD LENGTH 58

TYPE OF FILE INDEXED SEQUENTIAL

SOURCE

FIELD NO	FIELD NAME	COLUMNS FROM	COLUMNS THRU	NO. OF COLUMNS	TYPE N	TYPE A	JUS	VER	REMARKS AND INSTRUCTIONS
	ACCOUNT	1	10	10	X				
	NAME	11	50	20		X			(occurs 2 times)
	FUND	51	52	2	X				
	ACCT TYPE	53	54	2	X				
	MATCH	55	58	4	X				

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FILE LAYOUT FORMAT

NAME FINANCIAL MERGED FILE

SHEET NO. 2 **OF** 3

FILE RECORD NO.

RECORD LENGTH 100

TYPE OF FILE SEQUENTIAL

SOURCE

FIELD NO	FIELD NAME	COLUMNS		NO. OF COLUMNS	TYPE		JUS	VER	REMARKS AND INSTRUCTIONS
		FROM	THRU		N	A			
	ACCOUNT	1	10	10	X				
	FUND	15	16	2	X				
	ACCT TYPE	17	18	2	X				
	AMOUNT	21	30	10	X				

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AND ILLUSTRATIONS

PAGE NUMBER

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TYPING GUIDE SHEET

FILE LAYOUT FORMAT

NAME SPECIAL-ACCT-TABFI

SHEET NO. 3 OF 3

FILE RECORD NO.

RECORD LENGTH VARIABLE

TYPE OF FILE SEQUENTIAL

SOURCE

FIELD NO	FIELD NAME	COLUMNS FROM	COLUMNS THRU	NO. OF COLUMNS	TYPE N	TYPE A	JUS	VER	REMARKS AND INSTRUCTIONS
	NO. OF RECS	1	4		X				
	SEPC-ACCT								(occurs 1 to 99 times)
	NUMBERS	23	24	2	X				
	NAME	25	44	20		X			

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FILE LAYOUT FORMAT

NAME CROSS MATRIX FILE

SHEET NO. 1 **OF** 2

FILE RECORD NO.

RECORD LENGTH 80 Column

TYPE OF FILE INDEXED SEQUENTIAL

SOURCE

FIELD NO	FIELD NAME	COLUMNS FROM	COLUMNS THRU	NO. OF COLUMNS	TYPE N	TYPE A	JUS	VER	REMARKS AND INSTRUCTIONS
	MATCH CODE	1	4	4					
	ACCT NUMBER	5	14	10					
	CURRENT COST	21	30	10					
	PREV MONTH COST	31	40	10					
	CUR COST YTD	41	50	10					
	BUDGET AMOUNT	51	60	10					
	PREV YR COST	61	70	10					
	NOT USED	71	80	10					

3/8"
FOR TABLES AND ILLUSTRATIONS

FILE LAYOUT FORMAT

NAME FINANCIAL-MERGED-FILE

SHEET NO. ________ OF ________

FILE RECORD NO. ________

RECORD LENGTH 100

TYPE OF FILE SEQUENTIAL

SOURCE ________

FIELD NO	FIELD NAME	COLUMNS FROM	COLUMNS THRU	NO. OF COLUMNS	TYPE N	TYPE A	JUS	VER	REMARKS AND INSTRUCTIONS
	ACCOUNT	1	10	10					
	VALUE	21	30	10					(dollar amount)

TYPING GUIDE SHEET
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FILE LAYOUT FORMAT

NAME CROSS-MATRIX-FILE

SHEET NO. 1 **OF** 1

FILE RECORD NO. ______

RECORD LENGTH 80

TYPE OF FILE INDEXED SEQUENTIAL

SOURCE ______

FIELD NO	FIELD NAME	COLUMNS FROM	COLUMNS THRU	NO. OF COLUMNS	TYPE N	TYPE A	JUS	VER	REMARKS AND INSTRUCTIONS
	MATCH CODE	1	4	4					
	ACCOUNT	5	14	10					
	FUND	15	16	2					
	ACCT TYPE	17	18	2					
	CURRENT COST	22	30	10					
	PREV MONTH COST	31	40	10					
	CURR COST YTD	41	50	10					
	BUDGET AMOUNT	51	60	10					
	PREV YT COST	61	70	10					
	NOT USED	71	80	10					

3/8''
AND ILLUSTRATIONS
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FILE LAYOUT FORMAT

NAME CROSS-MATRIX-FILE

SHEET NO. 1 OF 1

FILE RECORD NO.

RECORD LENGTH 80

TYPE OF FILE INDEXED SEQUENTIAL

SOURCE

FIELD NO	FIELD NAME	COLUMNS FROM	COLUMNS THRU	NO. OF COLUMNS	TYPE N	TYPE A	JUS	VER	REMARKS AND INSTRUCTIONS
	MATCH CODE	1	4	4					
	ACCOUNT	5	14	10					
	FUND NO.	15	16	2					
	ACCT TYPE	17	18	2					
	CURRENT COST	21	30	10					
	PREV MONTH COST	31	40	10					
	CUR COST YTD	41	50	10					
	BUDGET AMOUNT	51	60	10					
	PREV YR COST	61	70	10					
	NOT USED	71	80	10					

TYPING GUIDE SHEET
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SECTION 4

PROGRAM FLOW DIAGRAMS

The following program flow diagrams are provided to illustrate the sequence within each program.

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9 1/8"
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3/8"
PAGE NUMBER
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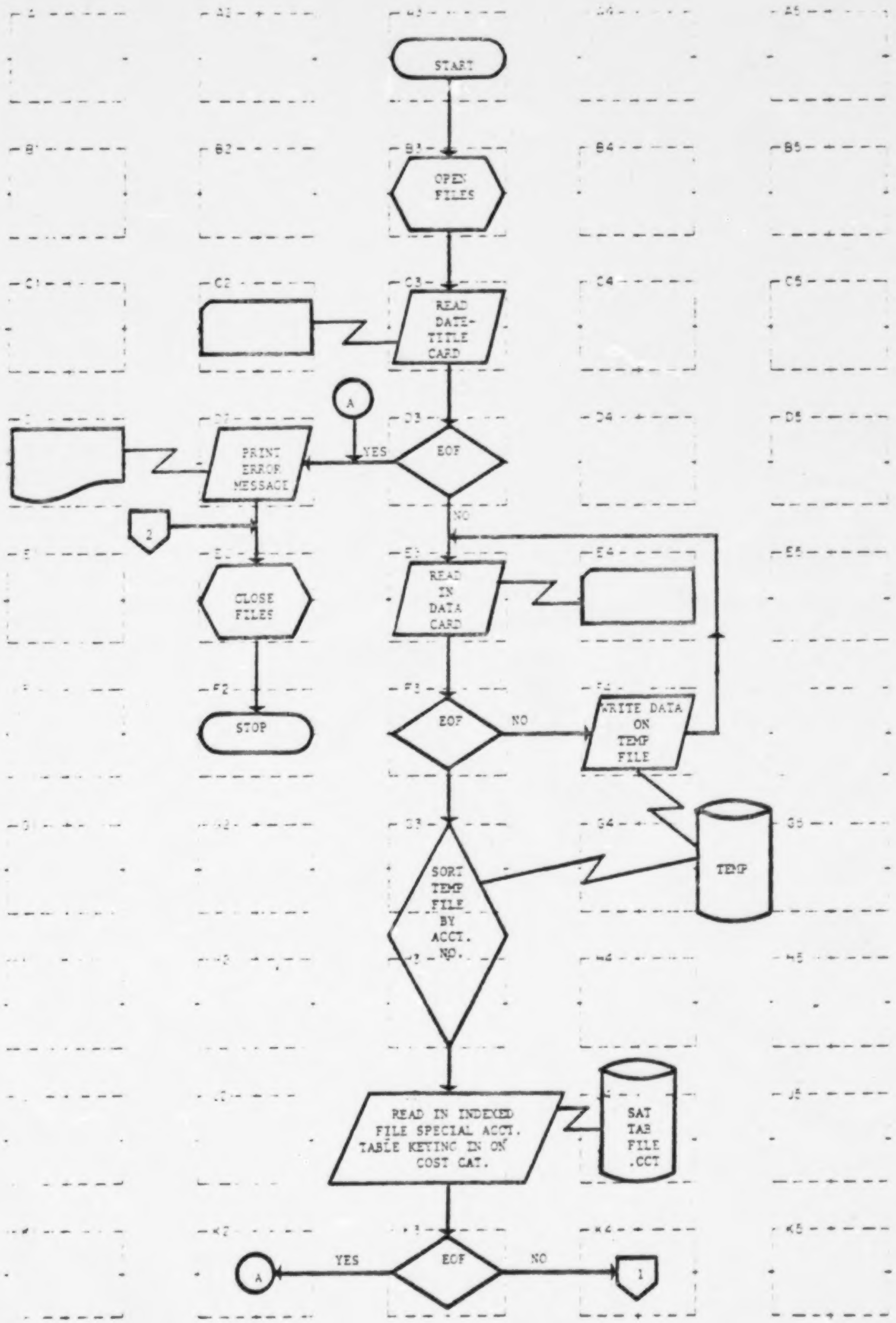
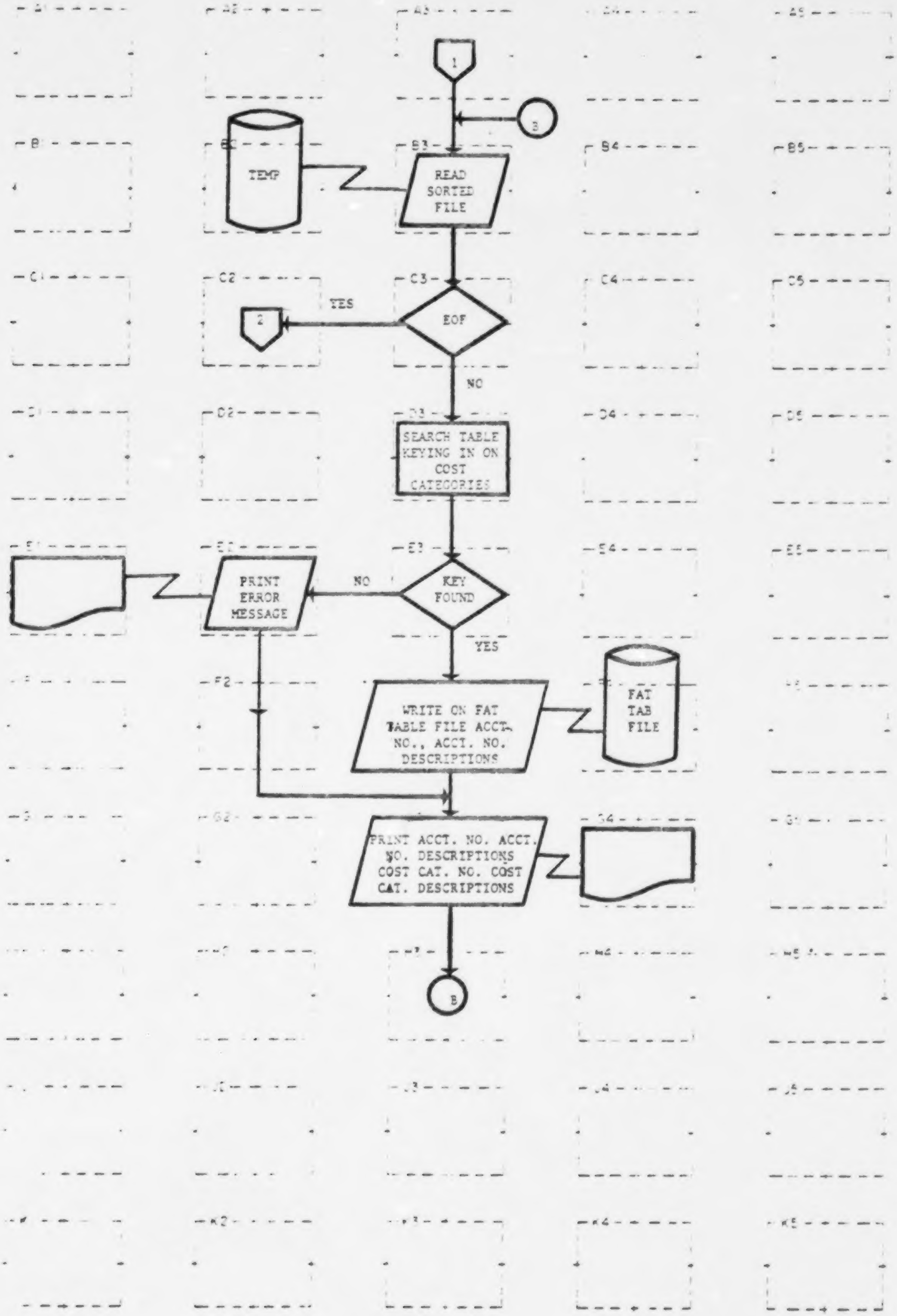
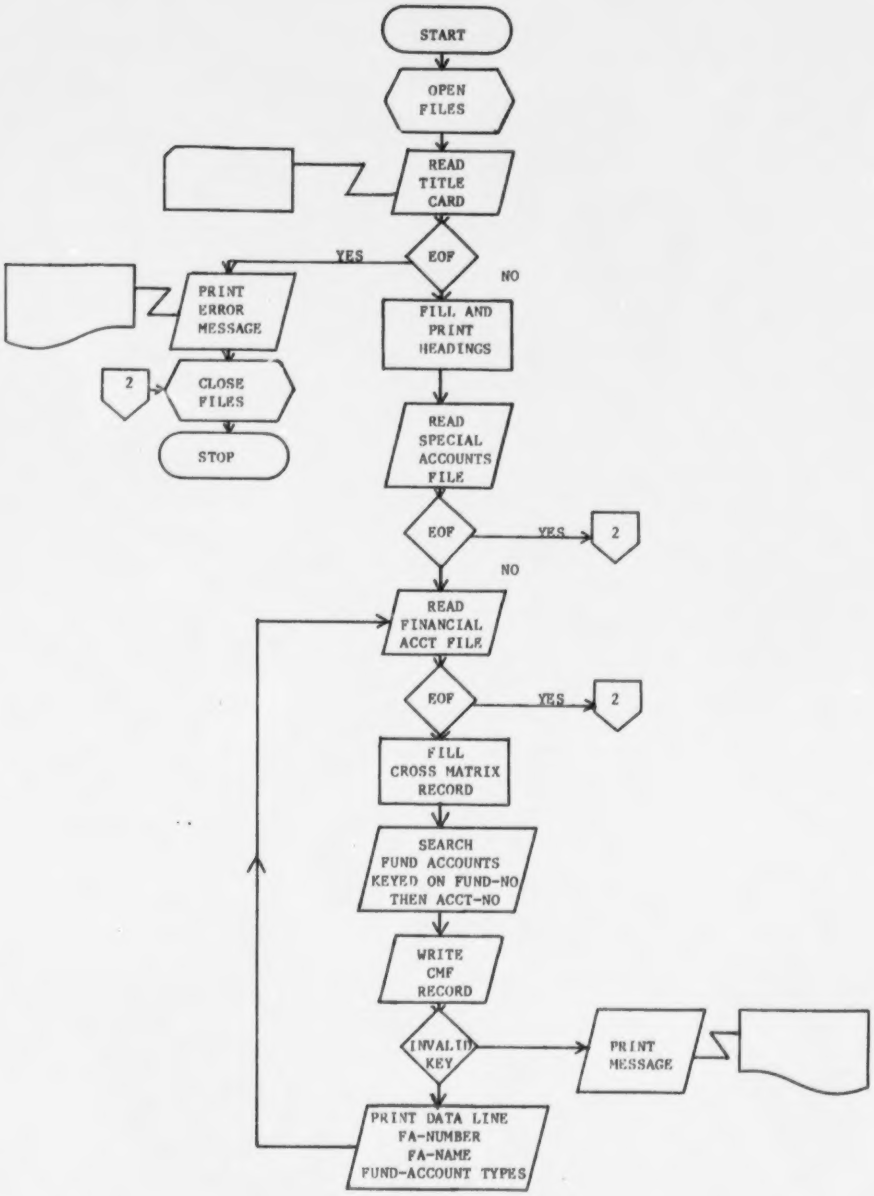
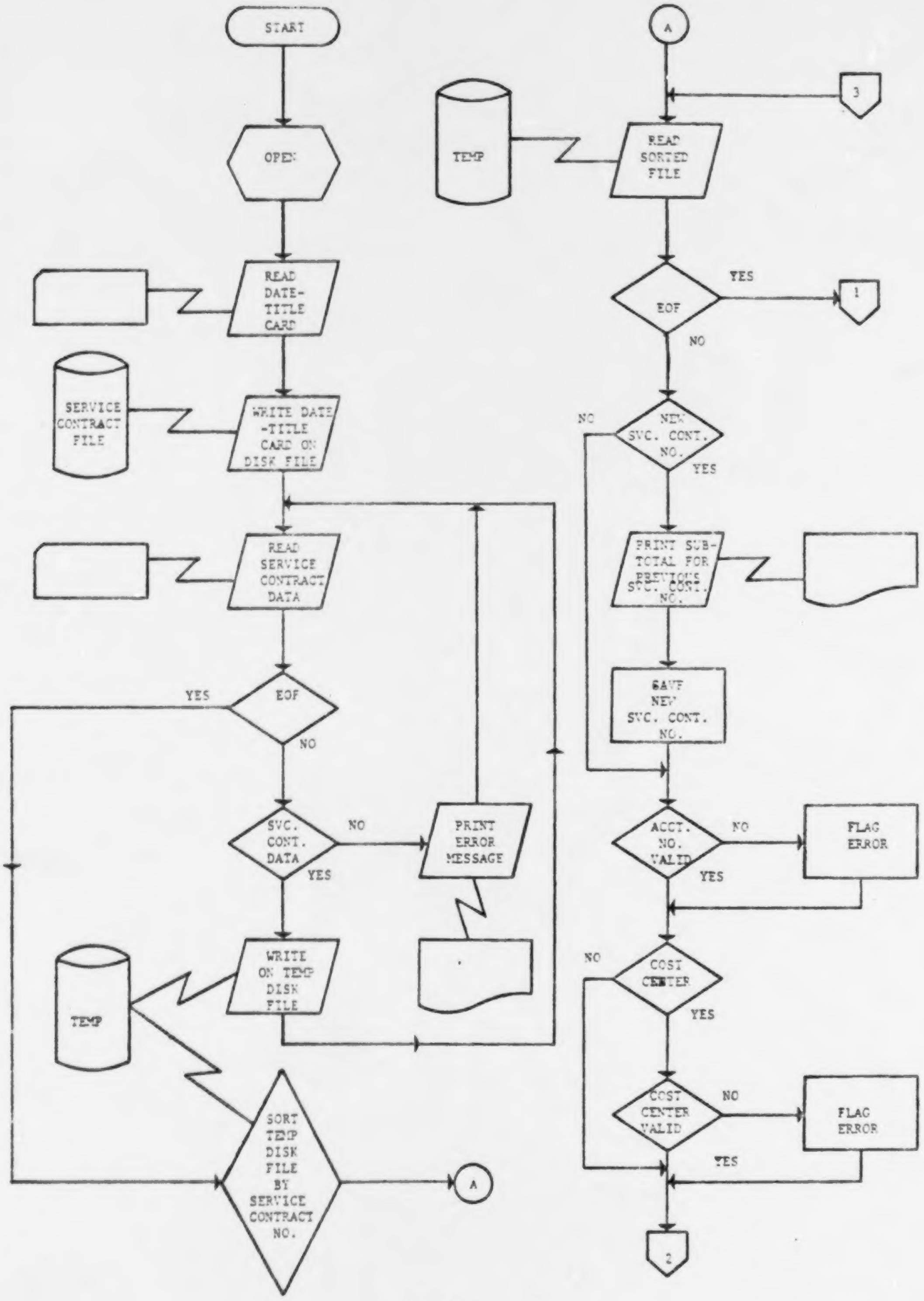
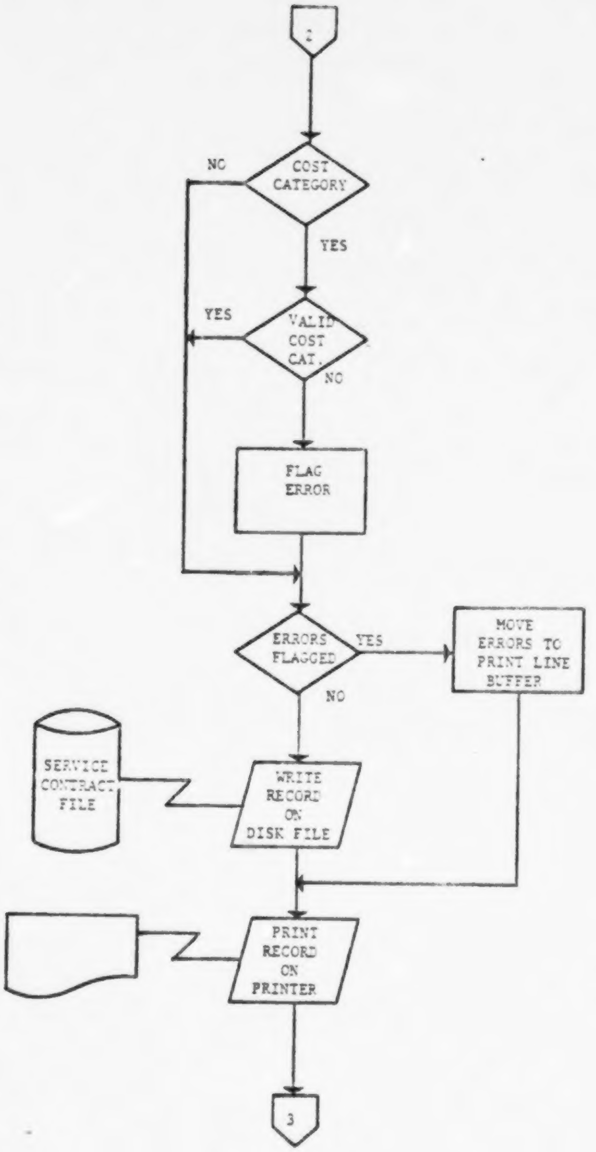
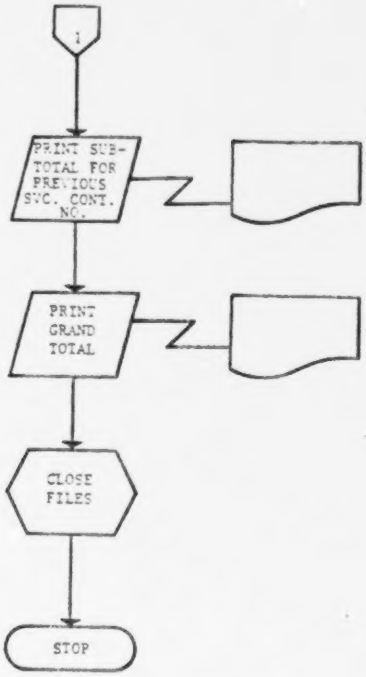

START
OPEN FILES
READ DATE-TITLE CARD
A
EOF
YES
PRINT ERROR MESSAGE
NO
2
CLOSE FILES
STOP
READ IN DATA CARD
EOF
NO
WRITE DATA ON TEMP FILE
TEMP
SORT TEMP FILE BY ACCT. NO.
READ IN INDEXED FILE SPECIAL ACCT. TABLE KEYING IN ON COST CAT.
SAT TAB FILE .CCT
A
YES
EOF
NO
1

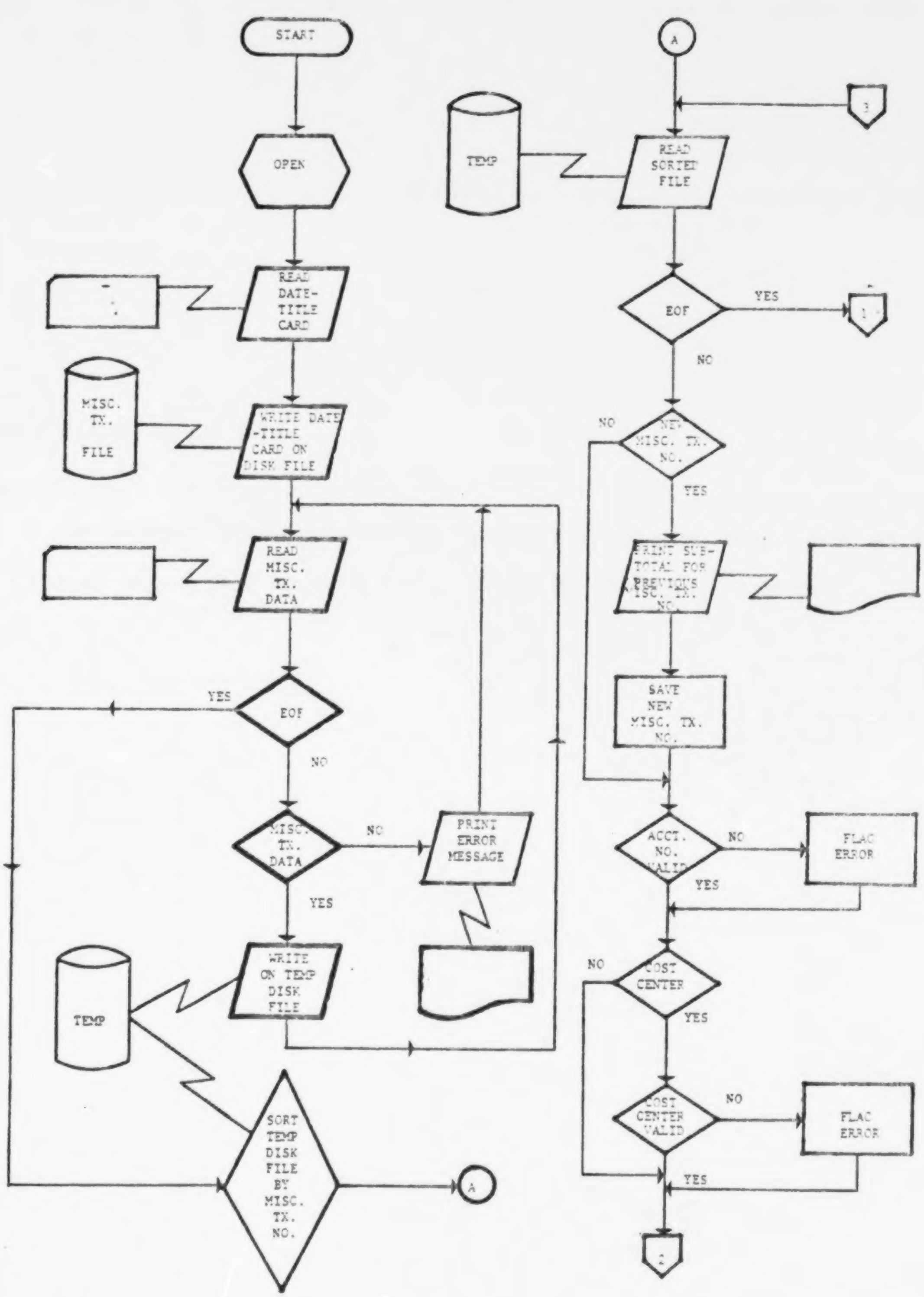

1
B
TEMP
READ SORTED FILE
YES
2
EOF
NO
SEARCH TABLE KEYING IN ON COST CATEGORIES
PRINT ERROR MESSAGE
NO
KEY FOUND
YES
WRITE ON FAT TABLE FILE ACCT. NO., ACCT. NO. DESCRIPTIONS
FAT TAB FILE
PRINT ACCT. NO. ACCT. NO. DESCRIPTIONS COST CAT. NO. COST CAT. DESCRIPTIONS
B


START
OPEN FILES
READ TITLE CARD
EOF
YES
NO
PRINT ERROR MESSAGE
2
CLOSE FILES
STOP
FILL AND PRINT HEADINGS
READ SPECIAL ACCOUNTS FILE
EOF
YES
2
NO
READ FINANCIAL ACCT FILE
EOF
YES
2
FILL CROSS MATRIX RECORD
SEARCH FUND ACCOUNTS KEYED ON FUND-NO THEN ACCT-NO
WRITE CMF RECORD
INVALID KEY
PRINT MESSAGE
PRINT DATA LINE FA-NUMBER FA-NAME FUND-ACCOUNT TYPES


START
OPEN
READ DATE-TITLE CARD
SERVICE CONTRACT FILE
WRITE DATE-TITLE CARD ON DISK FILE
READ SERVICE CONTRACT DATA
EOF
YES
NO
SVC. CONT. DATA
NO
YES
PRINT ERROR MESSAGE
TEMP
WRITE ON TEMP DISK FILE
SORT TEMP DISK FILE BY SERVICE CONTRACT NO.
A
A
3
TEMP
READ SORTED FILE
EOF
YES
1
NO
NEW SVC. CONT. NO.
NO
YES
PRINT SUB-TOTAL FOR PREVIOUS SVC. CONT. NO.
SAVE NEW SVC. CONT. NO.
ACCT. NO. VALID
NO
FLAG ERROR
YES
COST CENTER
NO
YES
COST CENTER VALID
NO
FLAG ERROR
YES
2


2
COST CATEGORY
NO
YES
VALID COST CAT.
YES
NO
FLAG ERROR
ERRORS FLAGGED
YES
NO
MOVE ERRORS TO PRINT LINE BUFFER
SERVICE CONTRACT FILE
WRITE RECORD ON DISK FILE
PRINT RECORD ON PRINTER
3


1
PRINT SUB-TOTAL FOR PREVIOUS SVC. CONT. NO.
PRINT GRAND TOTAL
CLOSE FILES
STOP


START
OPEN
READ DATE-TITLE CARD
MISC. TX. FILE
WRITE DATE-TITLE CARD ON DISK FILE
READ MISC. TX. DATA
EOF
YES
NO
MISC. TX. DATA
NO
PRINT ERROR MESSAGE
YES
TEMP
WRITE ON TEMP DISK FILE
SORT TEMP DISK FILE BY MISC. TX. NO.
A
A
3
TEMP
READ SORTED FILE
EOF
YES
1
NO
NO
NEW MISC. TX. NO.
YES
PRINT SUB-TOTAL FOR PREVIOUS MISC. TX. NO.
SAVE NEW MISC. TX. NO.
ACCT. NO. VALID
NO
FLAG ERROR
YES
NO
COST CENTER
YES
COST CENTER VALID
NO
FLAG ERROR
YES
2

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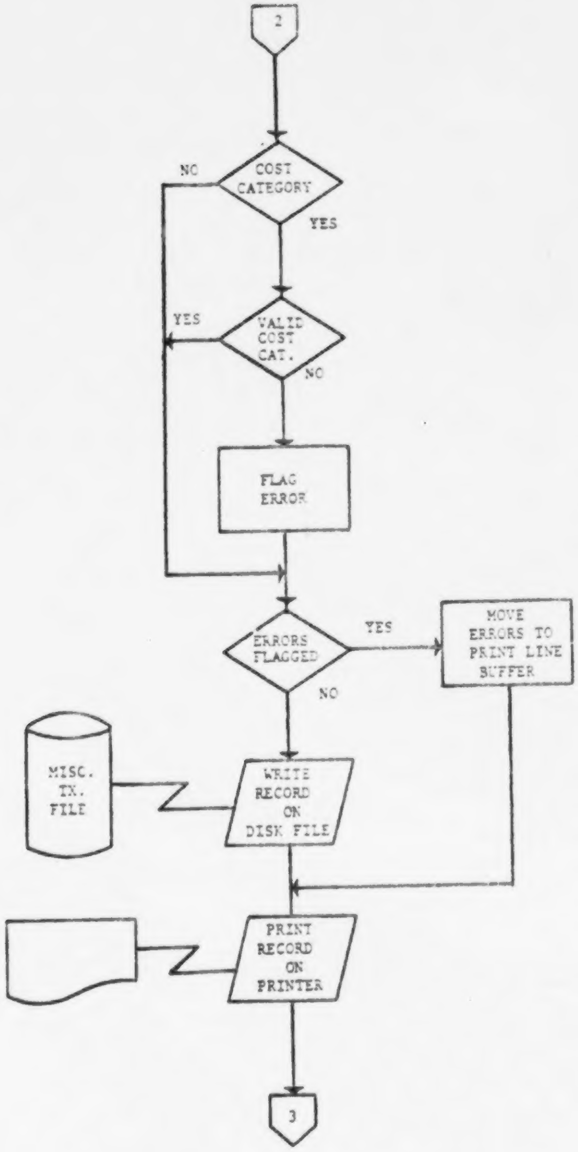
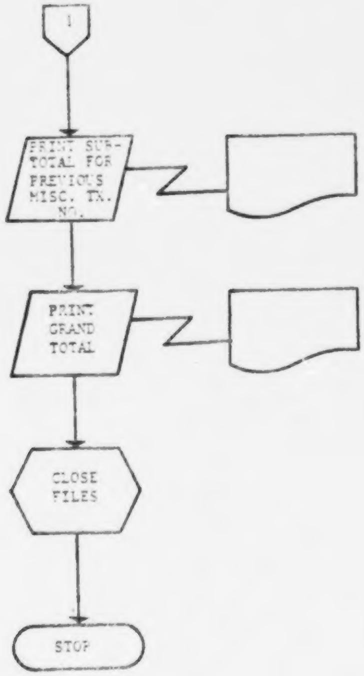
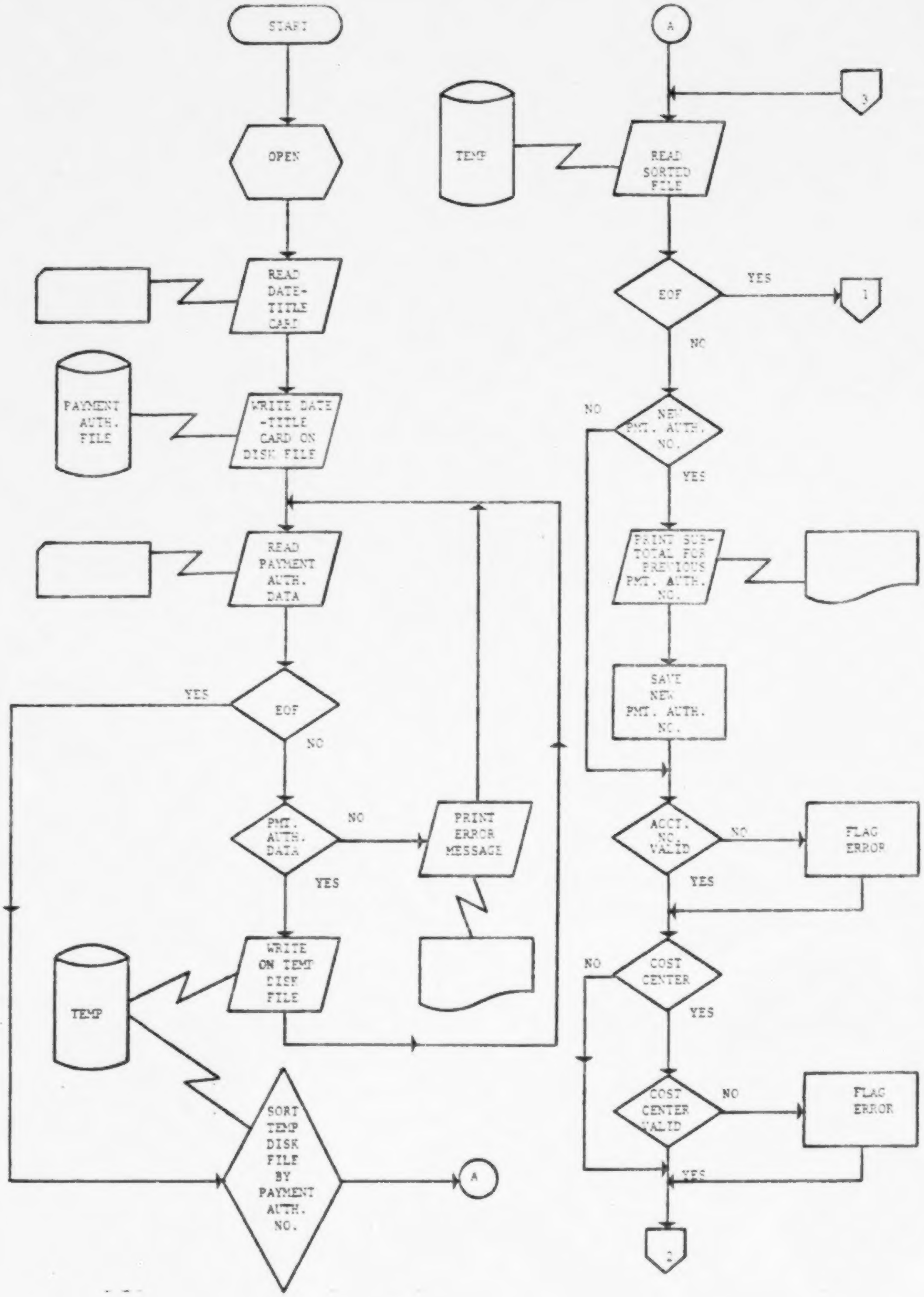
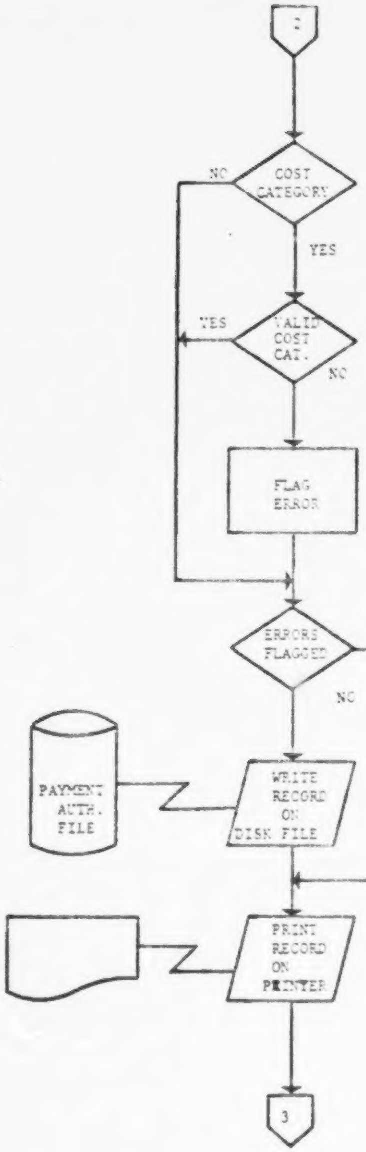
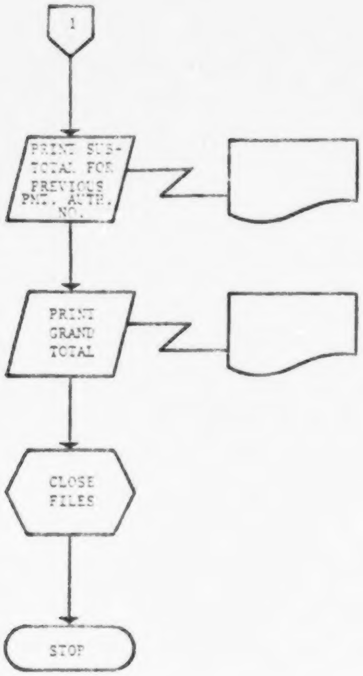
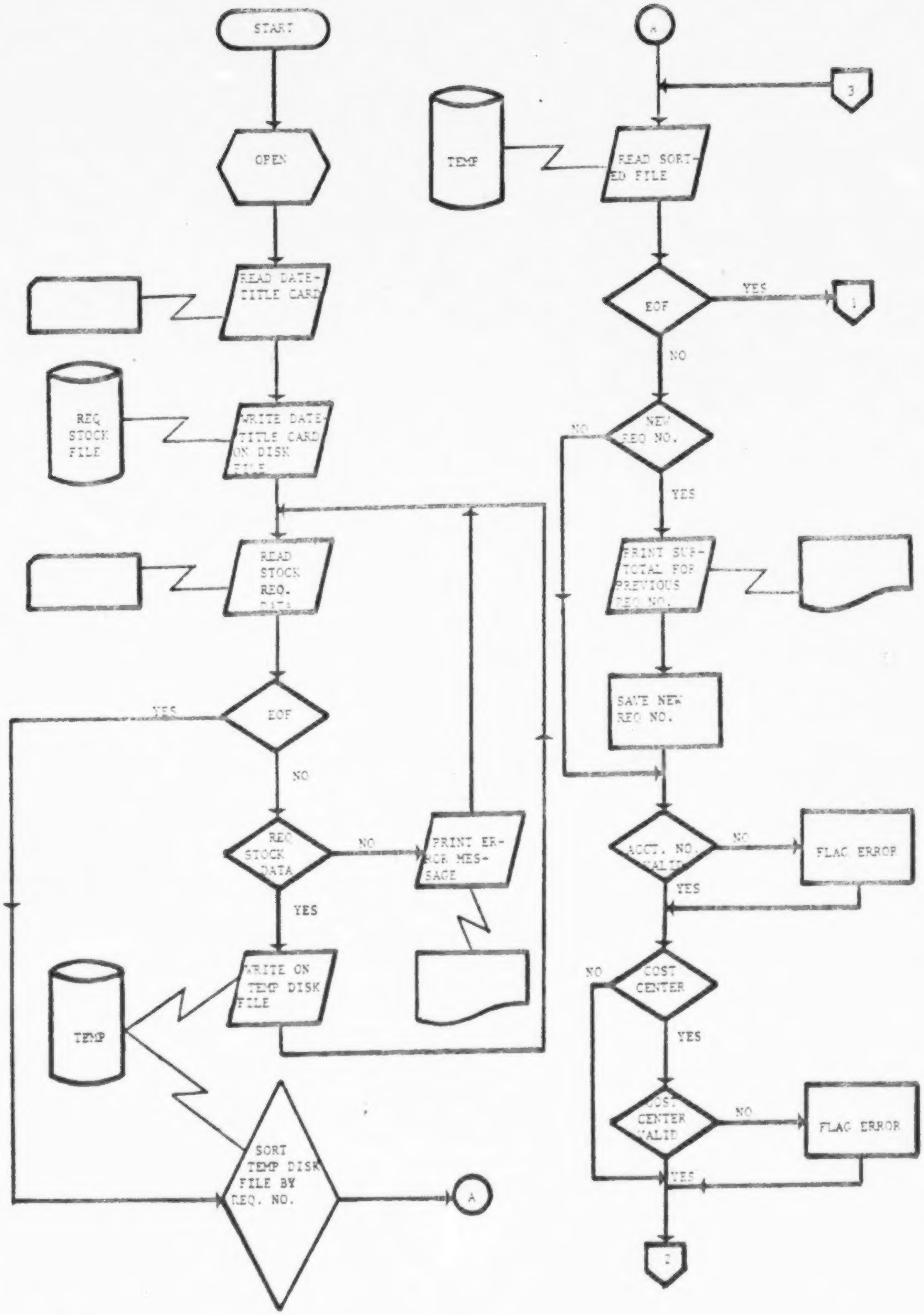

2
COST CATEGORY
NO
YES
VALID COST CAT.
YES
NO
FLAG ERROR
ERRORS FLAGGED
YES
NO
MOVE ERRORS TO PRINT LINE BUFFER
MISC. TX. FILE
WRITE RECORD ON DISK FILE
PRINT RECORD ON PRINTER
3

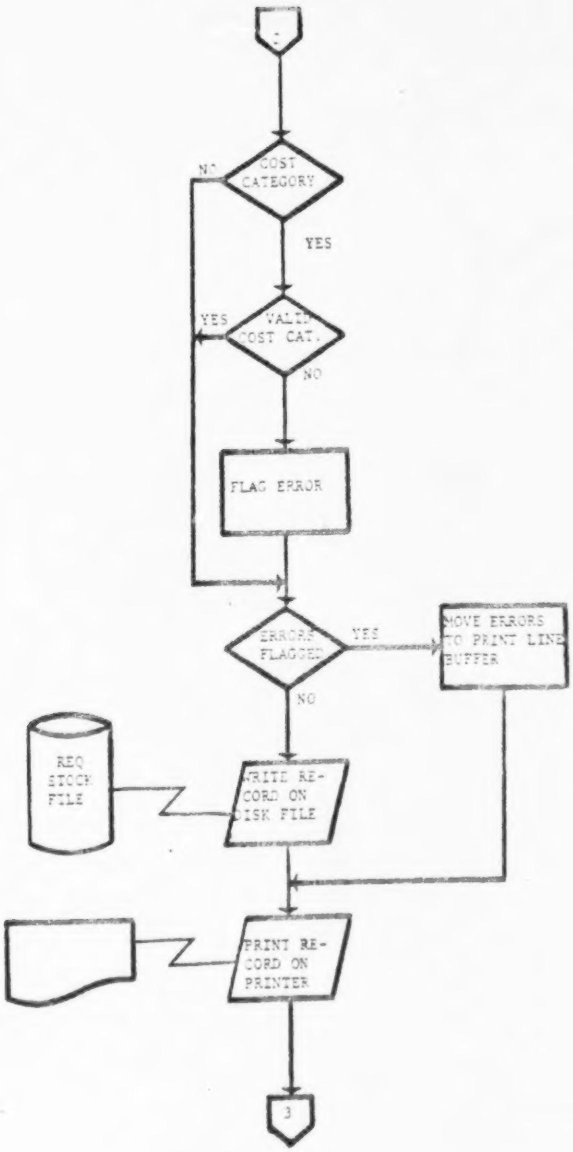

1
PRINT SUB-TOTAL FOR PREVIOUS MISC. TX. NO.
PRINT GRAND TOTAL
CLOSE FILES
STOP

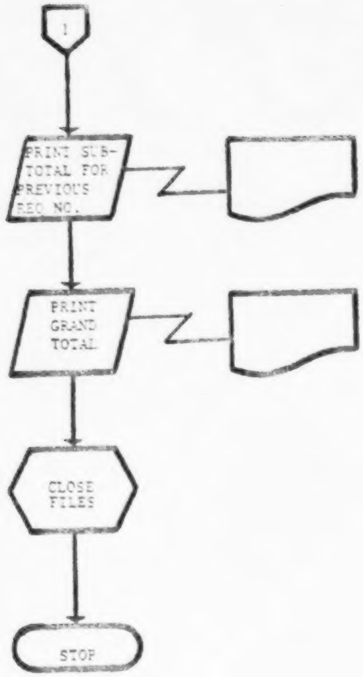

START
OPEN
READ DATE-TITLE CARD
PAYMENT AUTH. FILE
WRITE DATE -TITLE CARD ON DISK FILE
READ PAYMENT AUTH. DATA
EOF
YES
NO
PMT. AUTH. DATA
NO
YES
PRINT ERROR MESSAGE
WRITE ON TEMP DISK FILE
TEMP
SORT TEMP DISK FILE BY PAYMENT AUTH. NO.
A
A
3
TEMP
READ SORTED FILE
EOF
YES
1
NO
NO
NEW PMT. AUTH. NO.
YES
PRINT SUB-TOTAL FOR PREVIOUS PMT. AUTH. NO.
SAVE NEW PMT. AUTH. NO.
ACCT. NO. VALID
NO
FLAG ERROR
YES
NO
COST CENTER
YES
COST CENTER VALID
NO
FLAG ERROR
YES
2

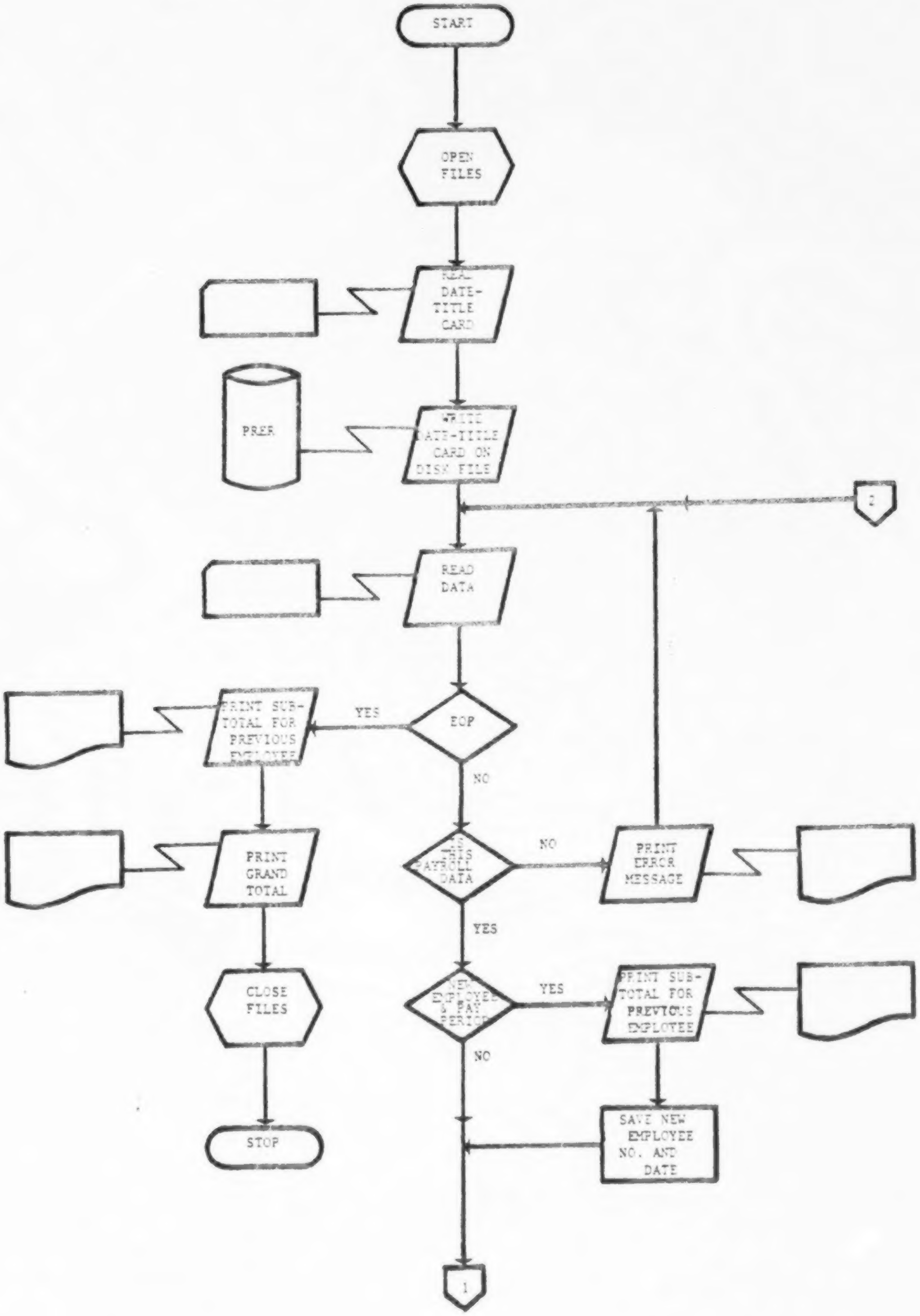

2
COST CATEGORY
NO
YES
VALID COST CAT.
YES
NO
FLAG ERROR
ERRORS FLAGGED
YES
NO
MOVE ERRORS TO PRINT LINE BUFFER
PAYMENT AUTH. FILE
WRITE RECORD ON DISK FILE
PRINT RECORD ON PRINTER
3

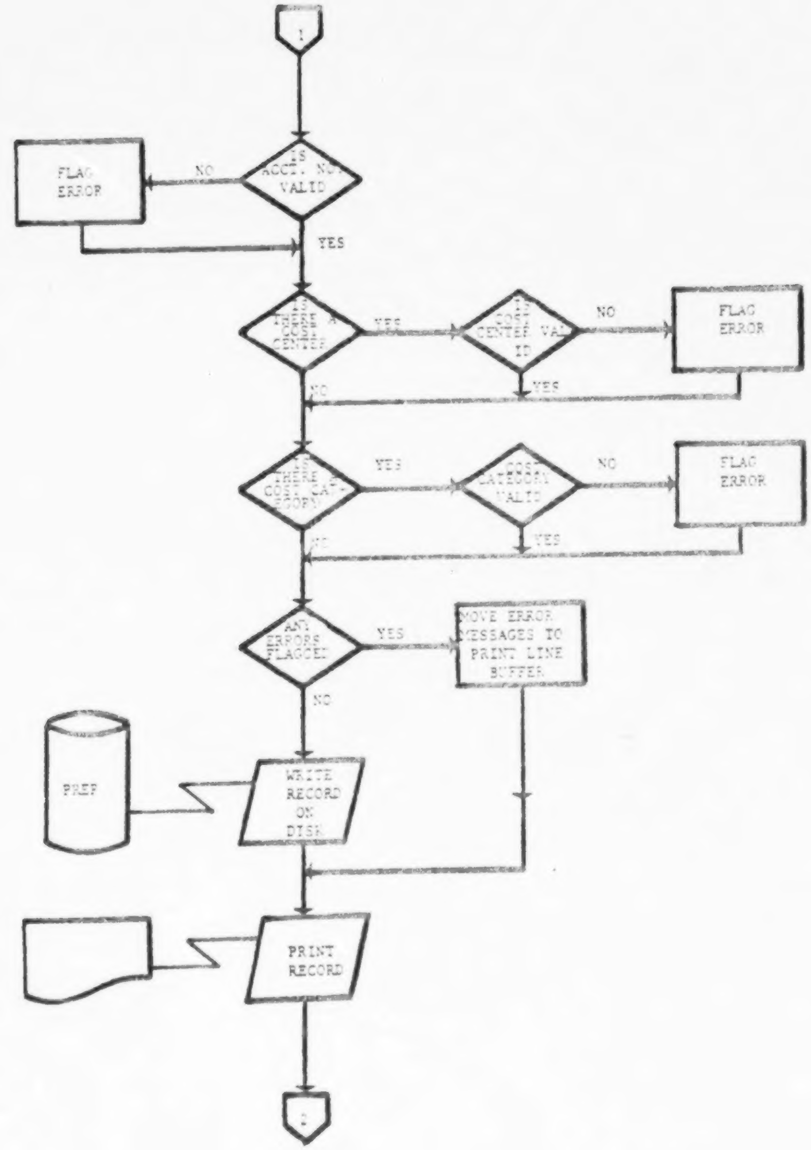

1
PRINT SUB-TOTAL FOR PREVIOUS PMT. AUTH. NO.
PRINT GRAND TOTAL
CLOSE FILES
STOP


START
OPEN
READ DATE-TITLE CARD
REQ STOCK FILE
WRITE DATE-TITLE CARD ON DISK FILE
READ STOCK REQ. DATA
EOF
YES
NO
REQ STOCK DATA
NO
PRINT ERROR MESSAGE
YES
WRITE ON TEMP DISK FILE
TEMP
SORT TEMP DISK FILE BY REQ. NO.
A
A
3
TEMP
READ SORTED FILE
EOF
YES
1
NO
NEW REQ NO.
NO
YES
PRINT SUBTOTAL FOR PREVIOUS REQ NO.
SAVE NEW REQ NO.
ACCT. NO. VALID
NO
FLAG ERROR
YES
COST CENTER
NO
YES
COST CENTER VALID
NO
FLAG ERROR
YES
2

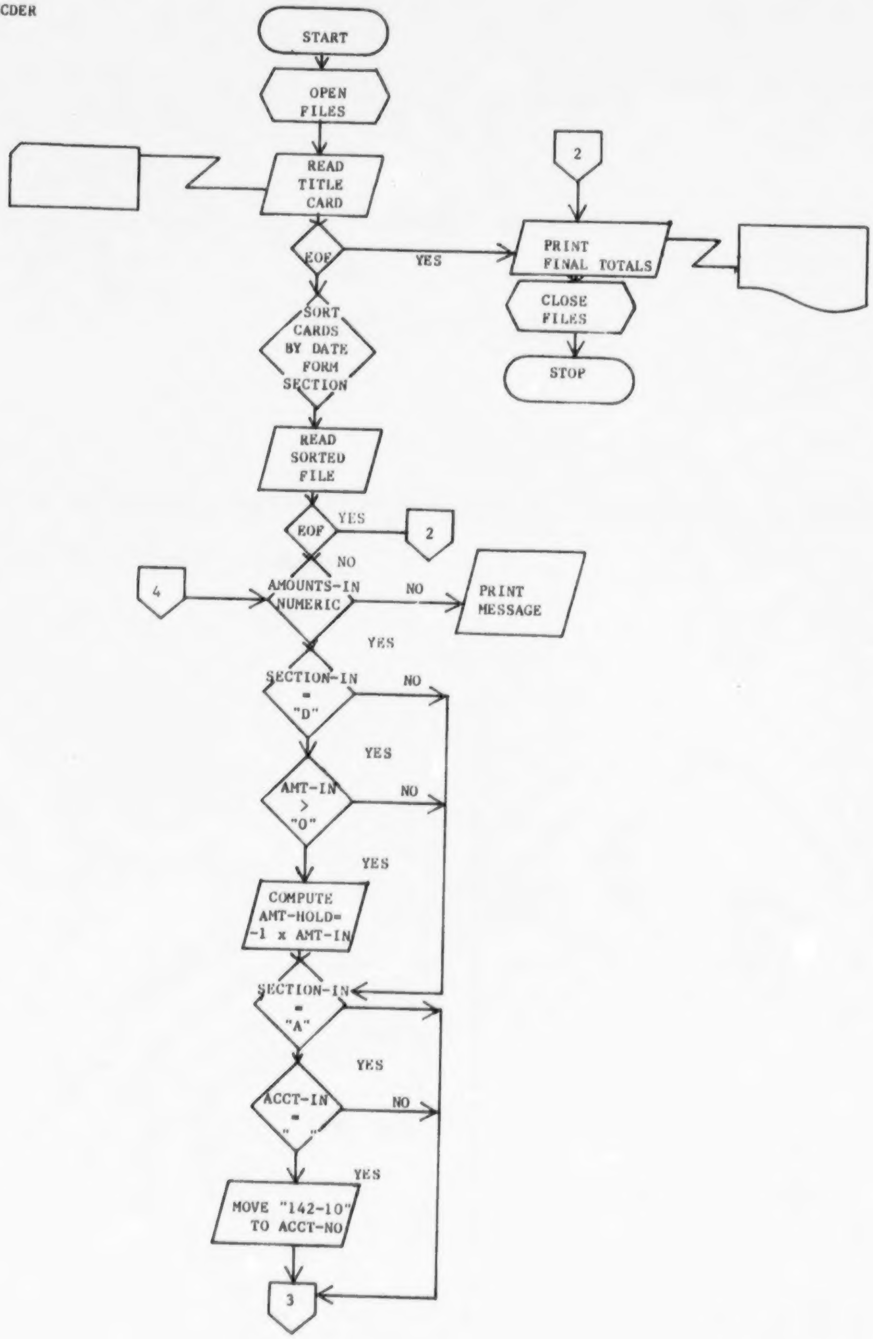

COST CATEGORY
NO
YES
VALID COST CAT.
YES
NO
FLAG ERROR
ERRORS FLAGGED
YES
MOVE ERRORS TO PRINT LINE BUFFER
NO
REQ STOCK FILE
WRITE RE-CORD ON DISK FILE
PRINT RE-CORD ON PRINTER
3


1
PRINT SUB-TOTAL FOR PREVIOUS REQ NO.
PRINT GRAND TOTAL
CLOSE FILES
STOP

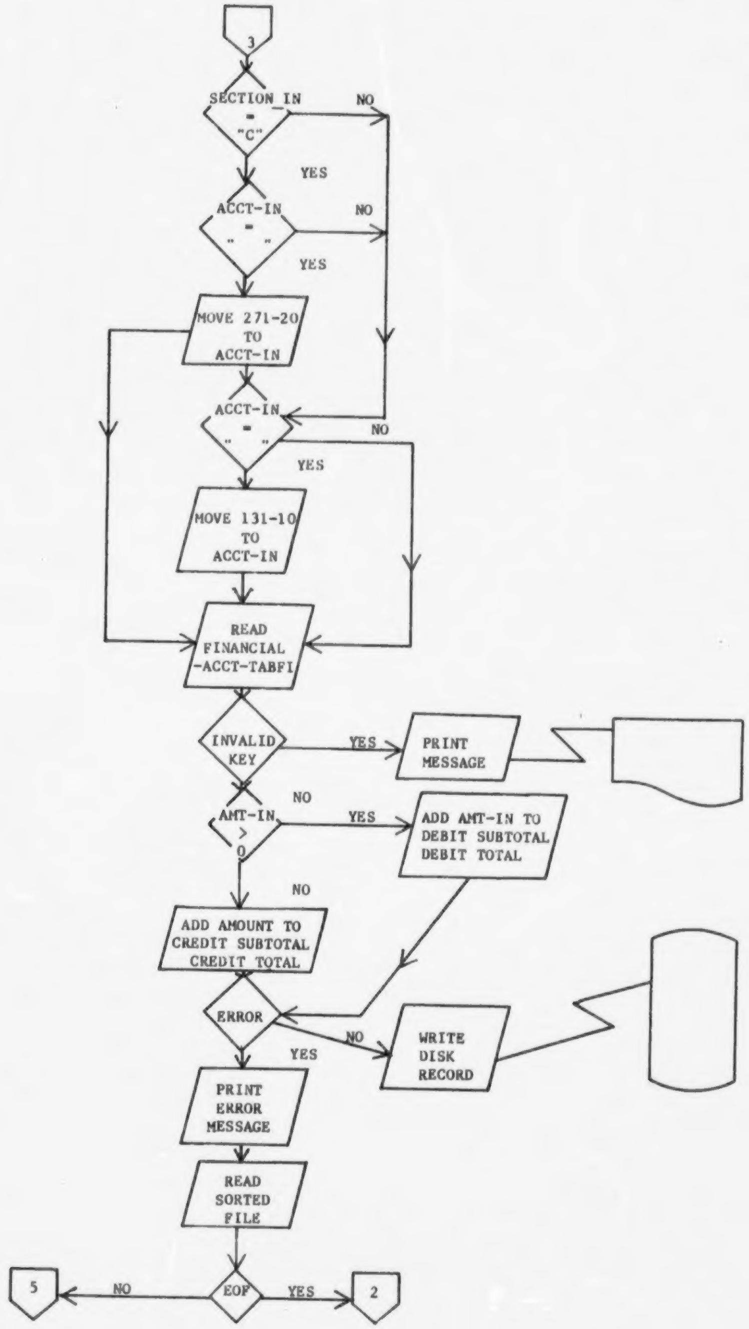

START
OPEN FILES
READ DATE-TITLE CARD
PRER
WRITE DATE-TITLE CARD ON DISK FILE
2
READ DATA
EOP
YES
PRINT SUB-TOTAL FOR PREVIOUS EMPLOYEE
NO
PRINT GRAND TOTAL
IS THIS PAYROLL DATA
NO
PRINT ERROR MESSAGE
YES
CLOSE FILES
NEW EMPLOYEE & PAY PERIOD
YES
PRINT SUB-TOTAL FOR PREVIOUS EMPLOYEE
NO
SAVE NEW EMPLOYEE NO. AND DATE
STOP
1


1
IS ACCT. NO. VALID
NO
FLAG ERROR
YES
IS THERE A COST CENTER
YES
IS COST CENTER VALID
NO
FLAG ERROR
YES
NO
IS THERE COST CATEGORY
YES
COST CATEGORY VALID
NO
FLAG ERROR
YES
NO
ANY ERRORS FLAGGED
YES
MOVE ERROR MESSAGES TO PRINT LINE BUFFER
NO
PREP
WRITE RECORD ON DISK
PRINT RECORD
2

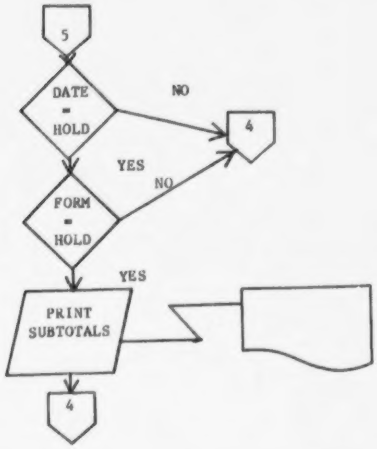
WUASCDER


START
OPEN FILES
READ TITLE CARD
EOF
YES
2
PRINT FINAL TOTALS
CLOSE FILES
STOP
SORT CARDS BY DATE FORM SECTION
READ SORTED FILE
EOF
YES
2
NO
4
AMOUNTS-IN NUMERIC
NO
PRINT MESSAGE
YES
SECTION-IN = "D"
NO
YES
AMT-IN > "0"
NO
YES
COMPUTE AMT-HOLD= -1 x AMT-IN
SECTION-IN = "A"
YES
ACCT-IN = " "
NO
YES
MOVE "142-10" TO ACCT-NO
3

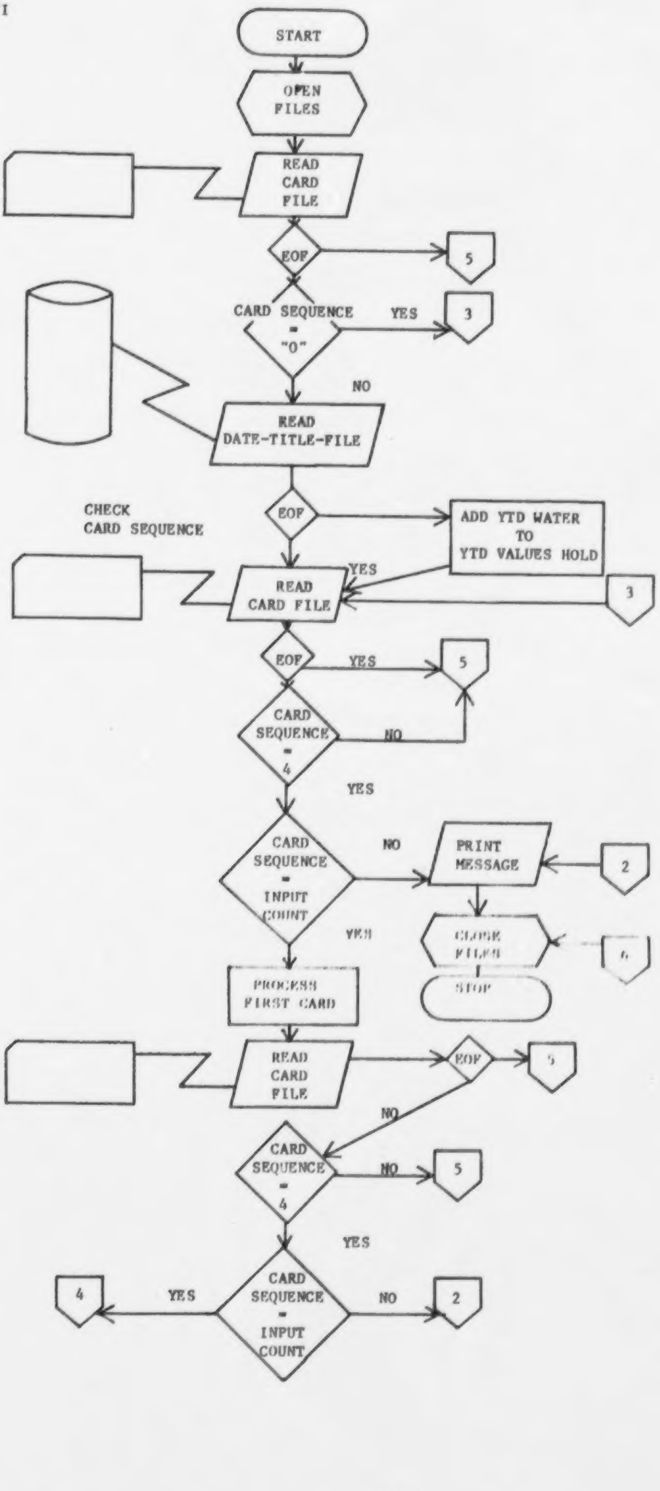
WUASCDER



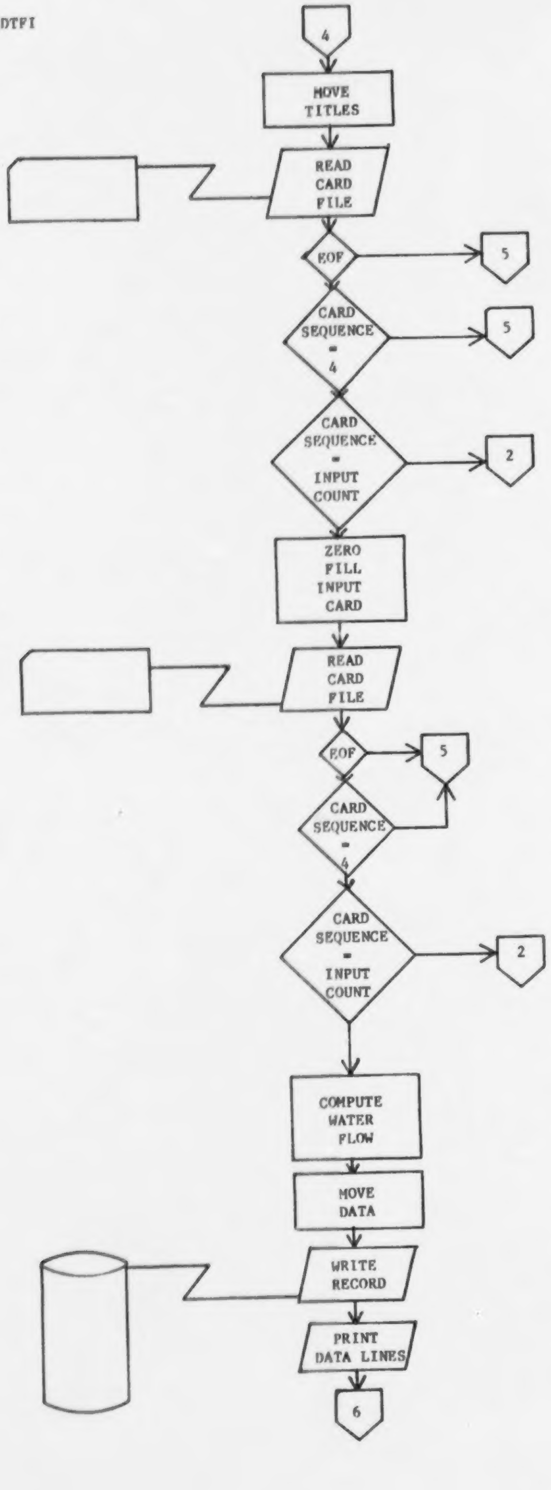
3
SECTION_IN = "C"
NO
YES
ACCT-IN = " "
NO
YES
MOVE 271-20 TO ACCT-IN
ACCT-IN = " "
NO
YES
MOVE 131-10 TO ACCT-IN
READ FINANCIAL -ACCT-TABFI
INVALID KEY
YES
PRINT MESSAGE
NO
AMT-IN > 0
YES
ADD AMT-IN TO DEBIT SUBTOTAL DEBIT TOTAL
NO
ADD AMOUNT TO CREDIT SUBTOTAL CREDIT TOTAL
ERROR
NO
WRITE DISK RECORD
YES
PRINT ERROR MESSAGE
READ SORTED FILE
EOF
NO
5
YES
2


5
DATE = HOLD
NO
4
YES
NO
FORM = HOLD
YES
PRINT SUBTOTALS
4

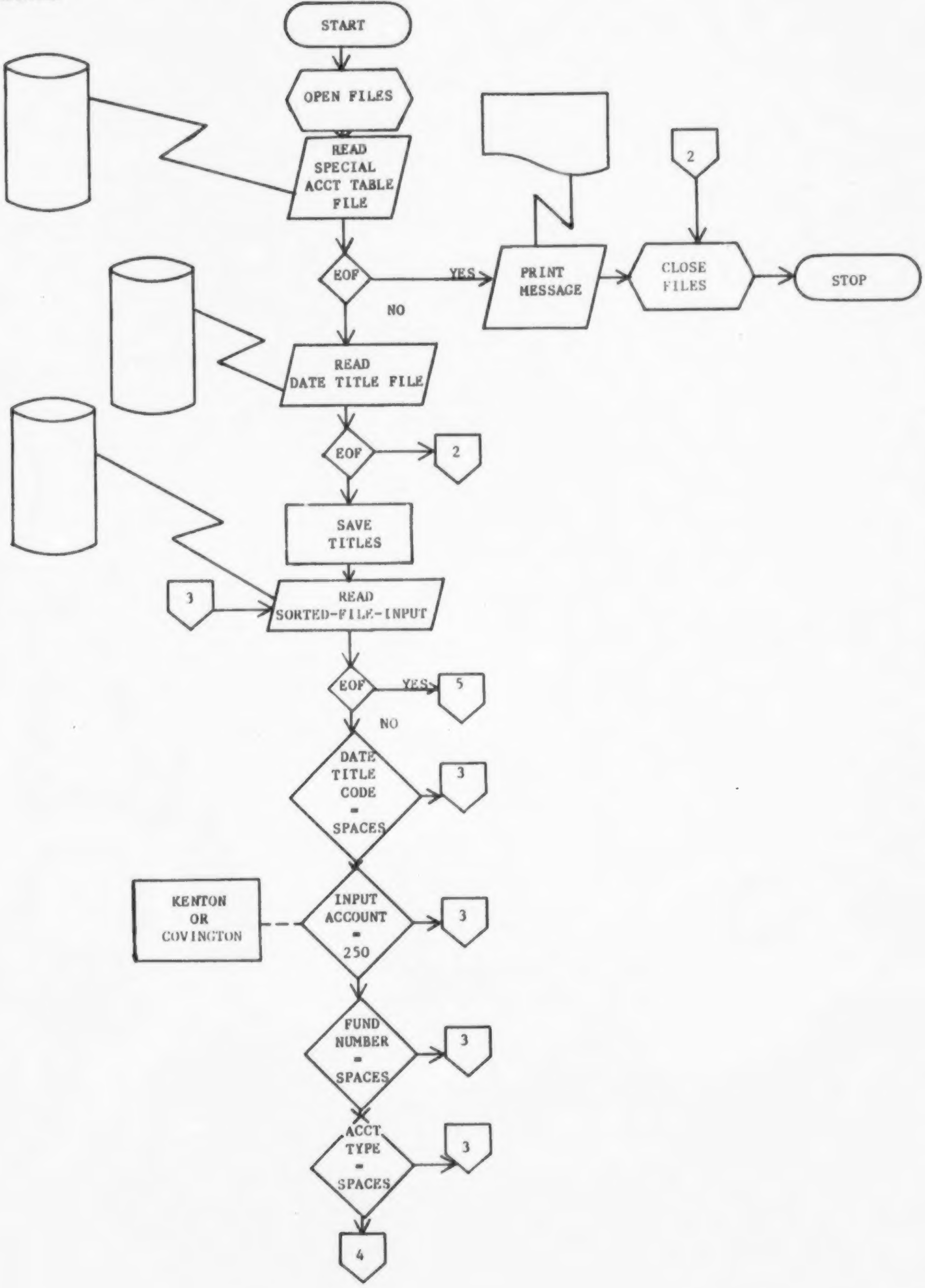
WUASDTFI


START
OPEN FILES
READ CARD FILE
EOF
5
CARD SEQUENCE = "0"
YES
3
NO
READ DATE-TITLE-FILE
CHECK CARD SEQUENCE
EOF
ADD YTD WATER TO YTD VALUES HOLD
YES
READ CARD FILE
3
EOF
YES
5
CARD SEQUENCE = 4
NO
YES
CARD SEQUENCE = INPUT COUNT
NO
PRINT MESSAGE
2
CLOSE FILES
6
STOP
YES
PROCESS FIRST CARD
READ CARD FILE
EOF
5
NO
CARD SEQUENCE = 4
NO
5
YES
4
YES
CARD SEQUENCE = INPUT COUNT
NO
2

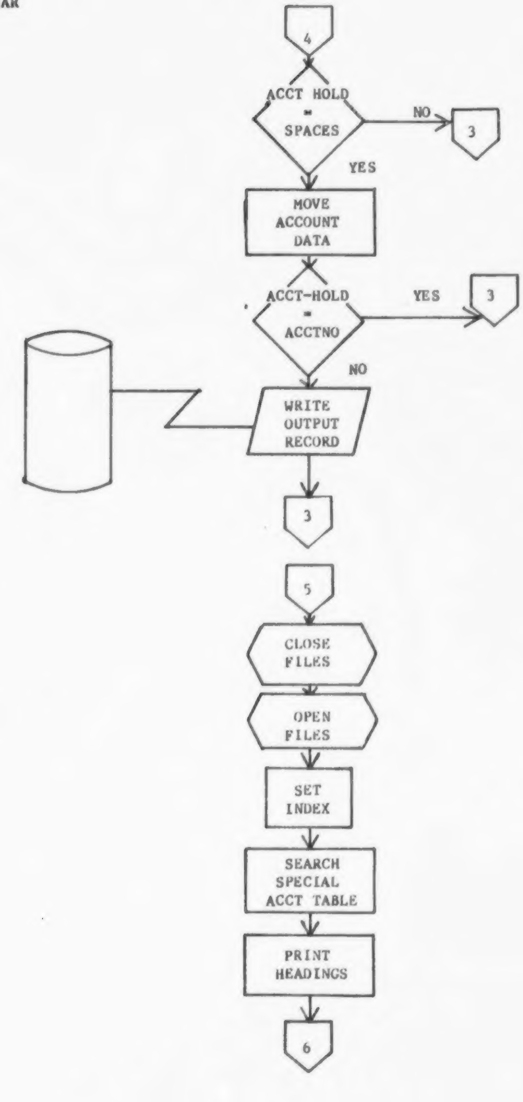
WUASDTFI

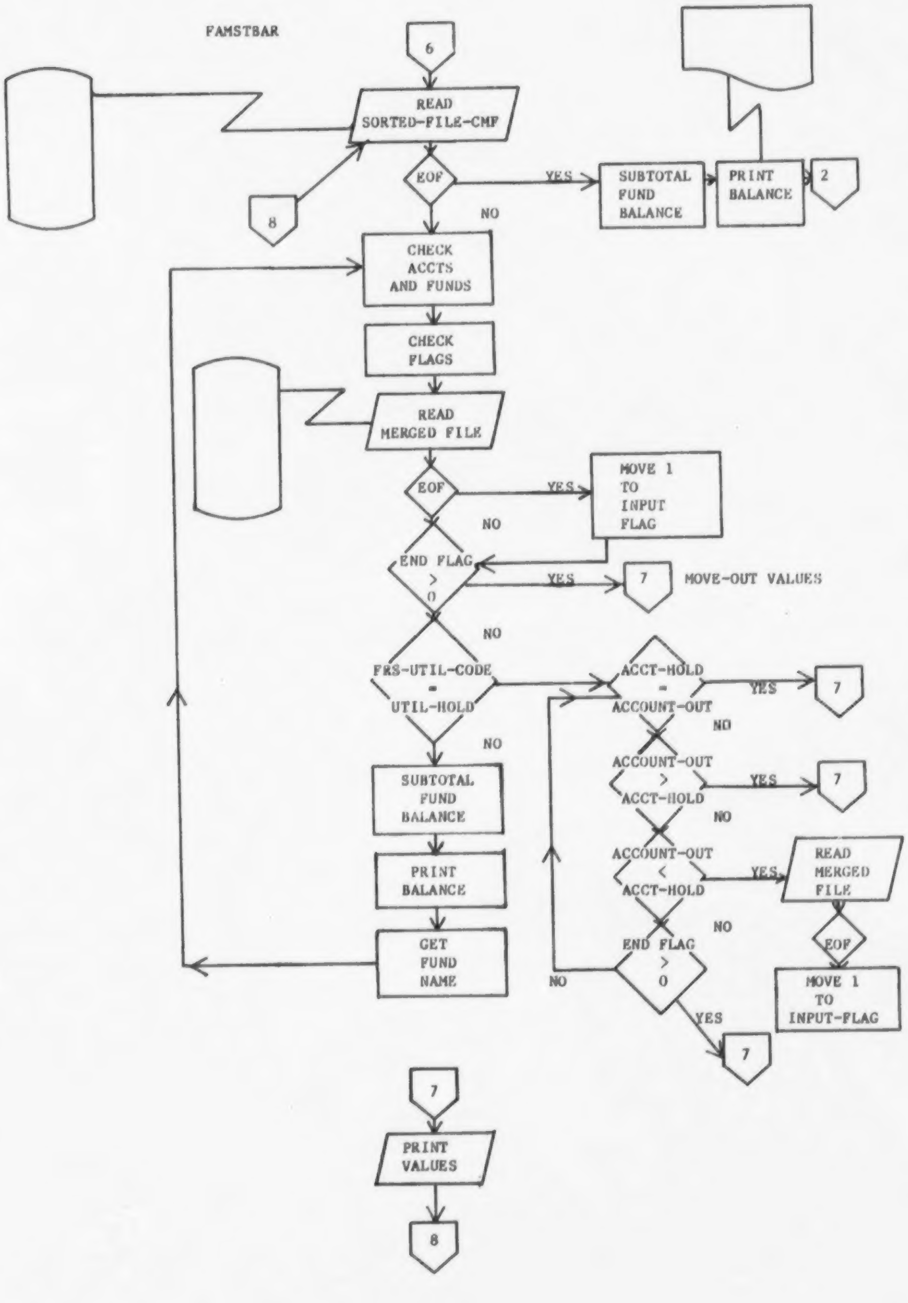

4
MOVE TITLES
READ CARD FILE
EOF
5
CARD SEQUENCE = 4
5
CARD SEQUENCE = INPUT COUNT
2
ZERO FILL INPUT CARD
READ CARD FILE
EOF
5
CARD SEQUENCE = 4
CARD SEQUENCE = INPUT COUNT
2
COMPUTE WATER FLOW
MOVE DATA
WRITE RECORD
PRINT DATA LINES
6

FAMSTBAR

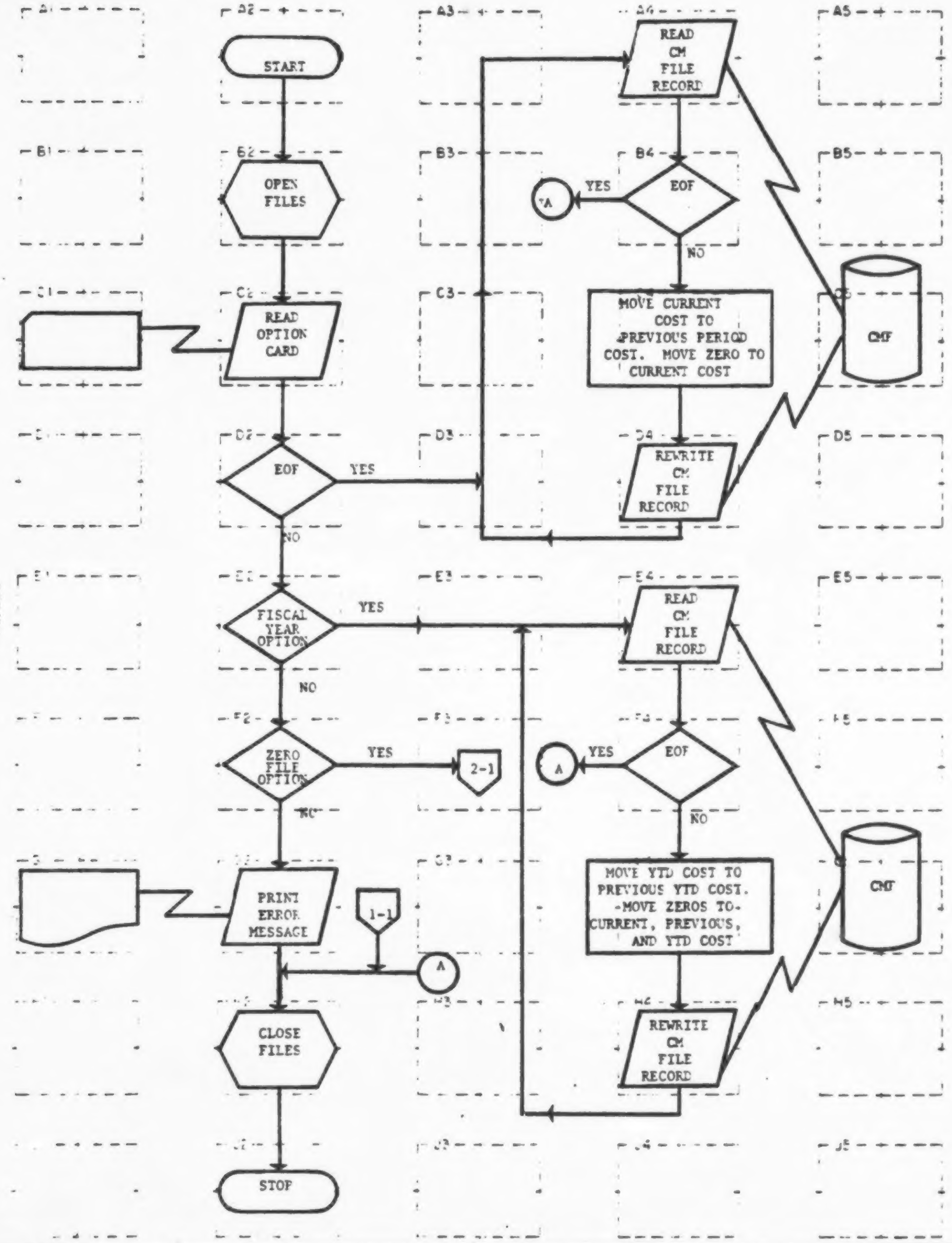

START
OPEN FILES
READ SPECIAL ACCT TABLE FILE
2
EOF
YES
PRINT MESSAGE
CLOSE FILES
STOP
NO
READ DATE TITLE FILE
EOF
2
SAVE TITLES
3
READ SORTED-FILE-INPUT
EOF
YES
5
NO
DATE TITLE CODE = SPACES
3
KENTON OR COVINGTON
INPUT ACCOUNT = 250
3
FUND NUMBER = SPACES
3
ACCT. TYPE = SPACES
3
4

FAMSTBAR


4
ACCT HOLD = SPACES
NO
3
YES
MOVE ACCOUNT DATA
ACCT-HOLD = ACCTNO
YES
3
NO
WRITE OUTPUT RECORD
3
5
CLOSE FILES
OPEN FILES
SET INDEX
SEARCH SPECIAL ACCT TABLE
PRINT HEADINGS
6


FAMSTBAR
6
READ
SORTED-FILE-CMF
8
EOF
YES
SUBTOTAL
FUND
BALANCE
PRINT
BALANCE
2
NO
CHECK
ACCTS
AND FUNDS
CHECK
FLAGS
READ
MERGED FILE
EOF
YES
MOVE 1
TO
INPUT
FLAG
NO
END FLAG
>
0
YES
7
MOVE-OUT VALUES
NO
FRS-UTIL-CODE
=
UTIL-HOLD
ACCT-HOLD
=
ACCOUNT-OUT
YES
7
NO
NO
SUBTOTAL
FUND
BALANCE
ACCOUNT-OUT
>
ACCT-HOLD
YES
7
NO
PRINT
BALANCE
ACCOUNT-OUT
<
ACCT-HOLD
YES
READ
MERGED
FILE
NO
GET
FUND
NAME
END FLAG
>
0
NO
EOF
MOVE 1
TO
INPUT-FLAG
YES
7
7
PRINT
VALUES
8

BEGIN FIRST
TYPING GUIDE SHEET
CENTER
TOP OF


START
OPEN FILES
READ OPTION CARD
EOF
YES
NO
FISCAL YEAR OPTION
YES
NO
ZERO FILE OPTION
YES
2-1
NO
PRINT ERROR MESSAGE
1-1
A
CLOSE FILES
STOP
READ CM FILE RECORD
EOF
YES
A
NO
MOVE CURRENT COST TO PREVIOUS PERIOD COST. MOVE ZERO TO CURRENT COST
REWRITE CM FILE RECORD
CMF
READ CM FILE RECORD
EOF
YES
A
NO
MOVE YTD COST TO PREVIOUS YTD COST. MOVE ZEROS TO CURRENT, PREVIOUS, AND YTD COST
REWRITE CM FILE RECORD
CMF

3/8"
FOR TABLES AND ILLUSTRATIONS

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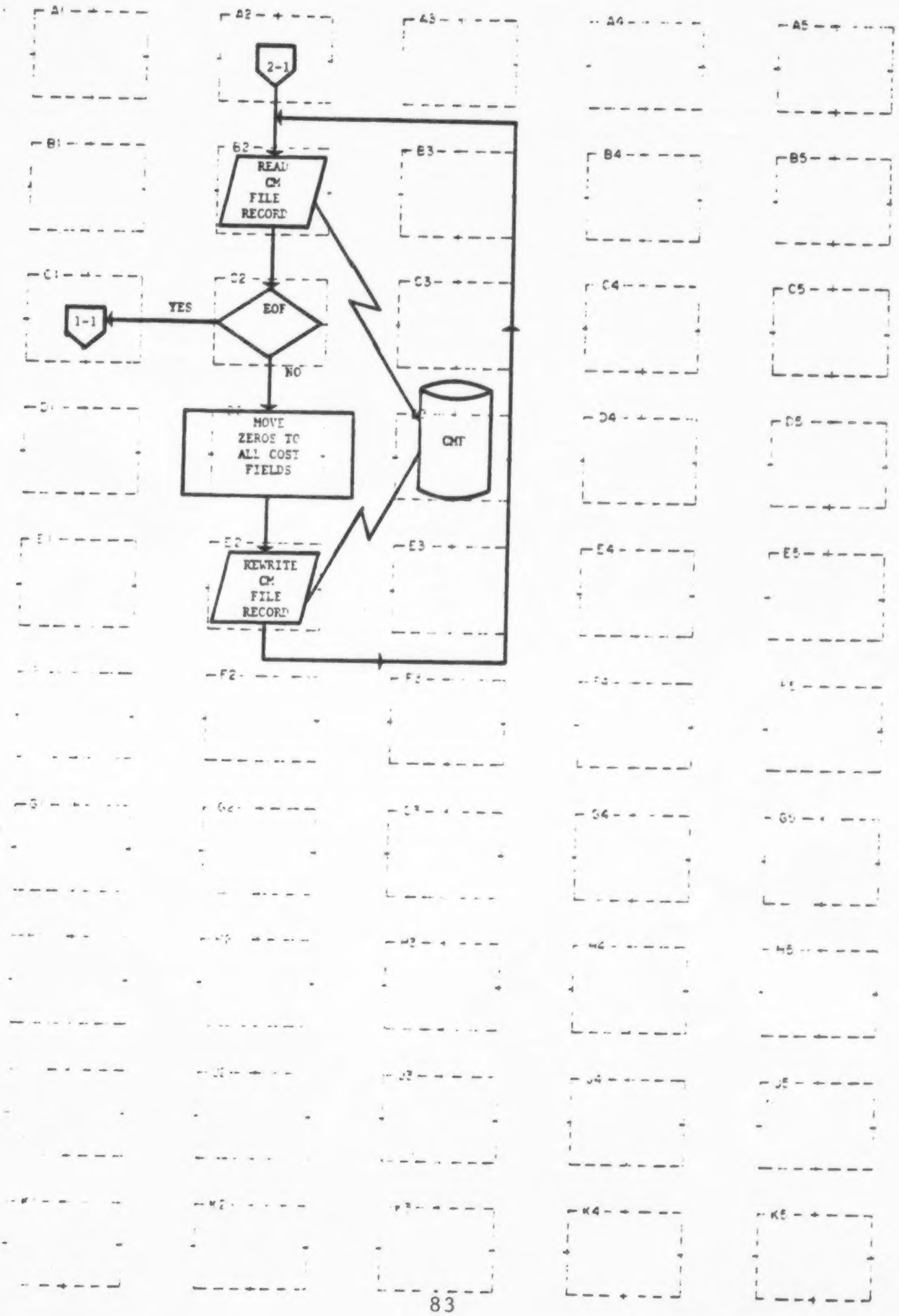
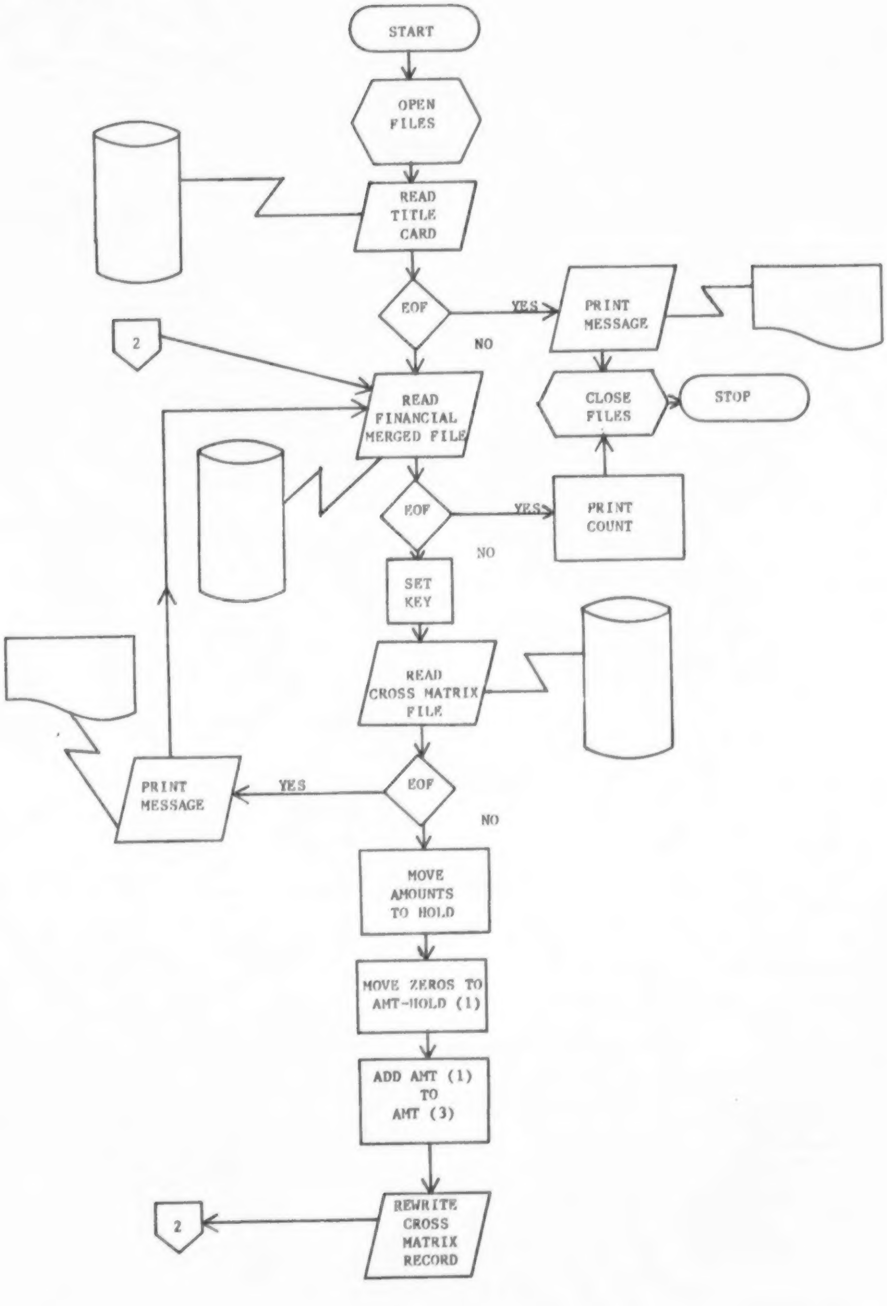
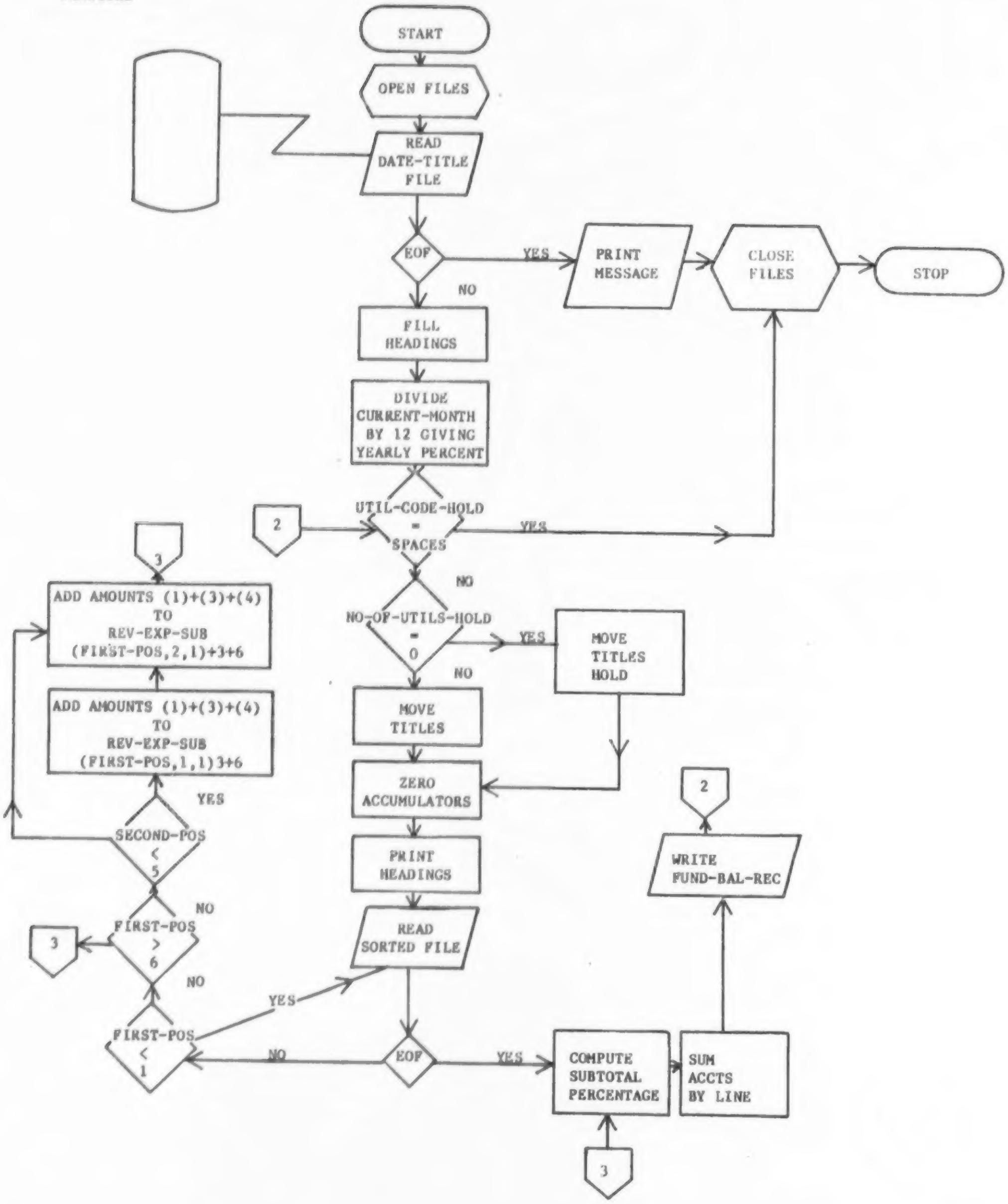

2-1
READ CM FILE RECORD
EOF
YES
NO
1-1
MOVE ZEROS TO ALL COST FIELDS
CMT
REWRITE CM FILE RECORD
A1
A2
A3
A4
A5
B1
B2
B3
B4
B5
C1
C2
C3
C4
C5
D4
D5
E2
E3
E4
E5
F2
G4
G5
H4
H5
J4
K4
K5

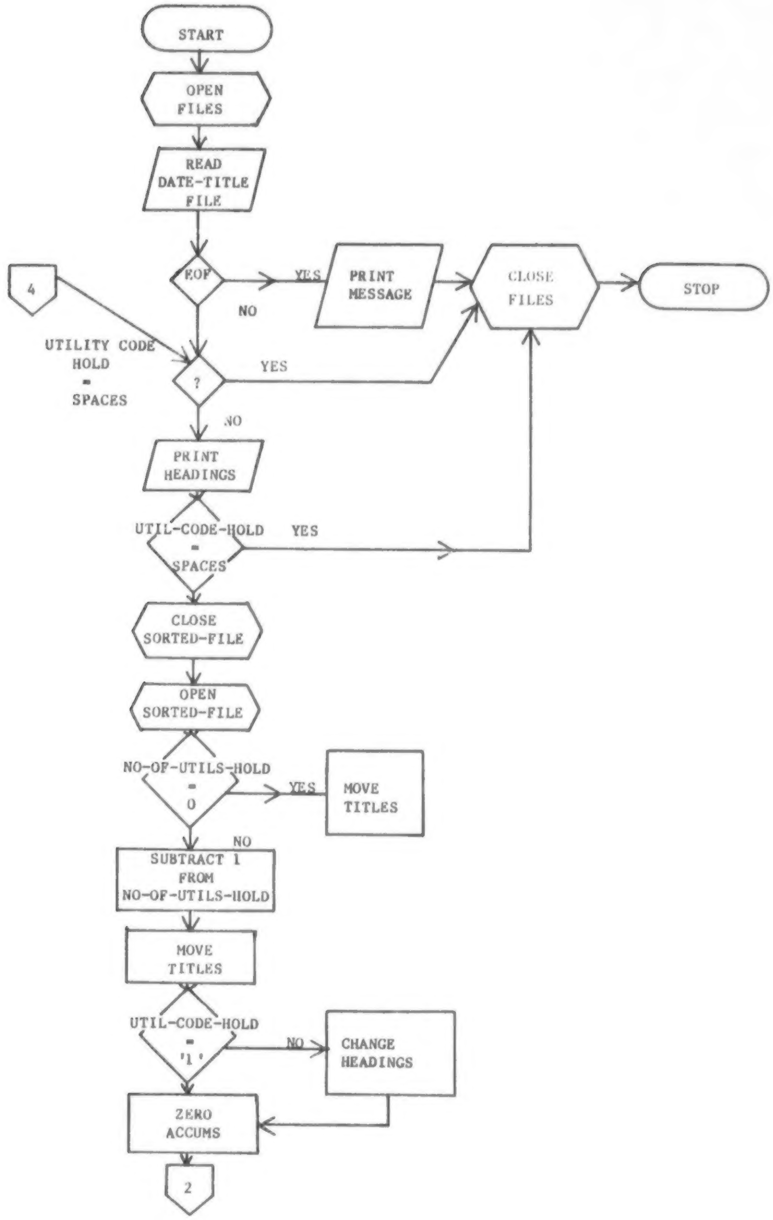
FAMSCUPD


START
OPEN FILES
READ TITLE CARD
EOF
YES
PRINT MESSAGE
NO
2
CLOSE FILES
STOP
READ FINANCIAL MERGED FILE
EOF
YES
PRINT COUNT
NO
SET KEY
READ CROSS MATRIX FILE
PRINT MESSAGE
YES
EOF
NO
MOVE AMOUNTS TO HOLD
MOVE ZEROS TO AMT-HOLD (1)
ADD AMT (1) TO AMT (3)
2
REWRITE CROSS MATRIX RECORD

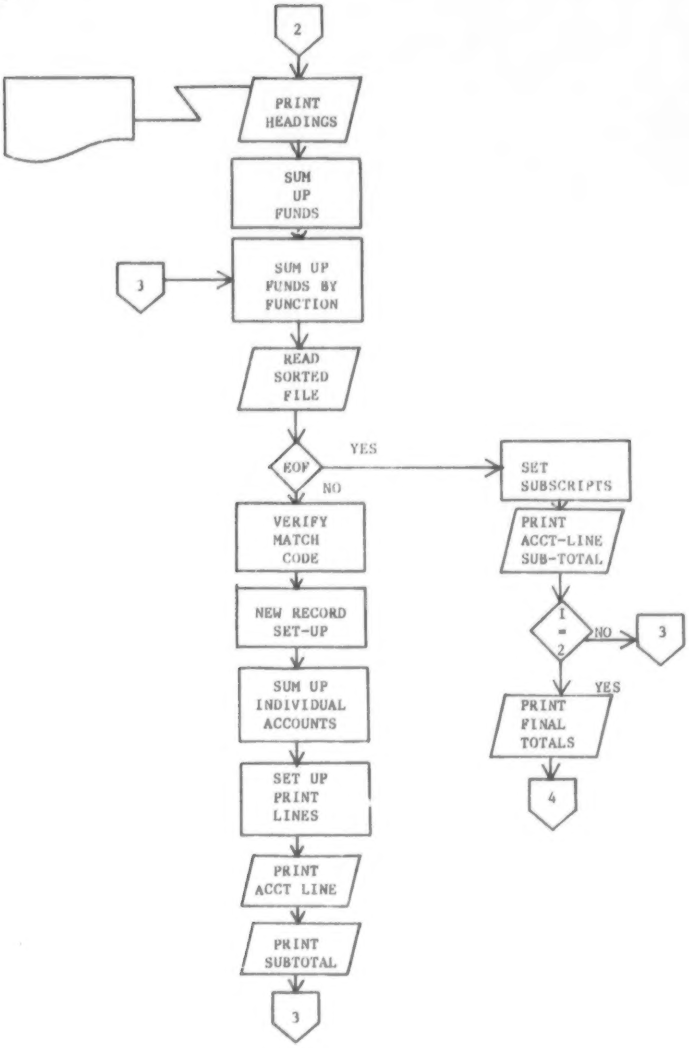
FAMSSORE

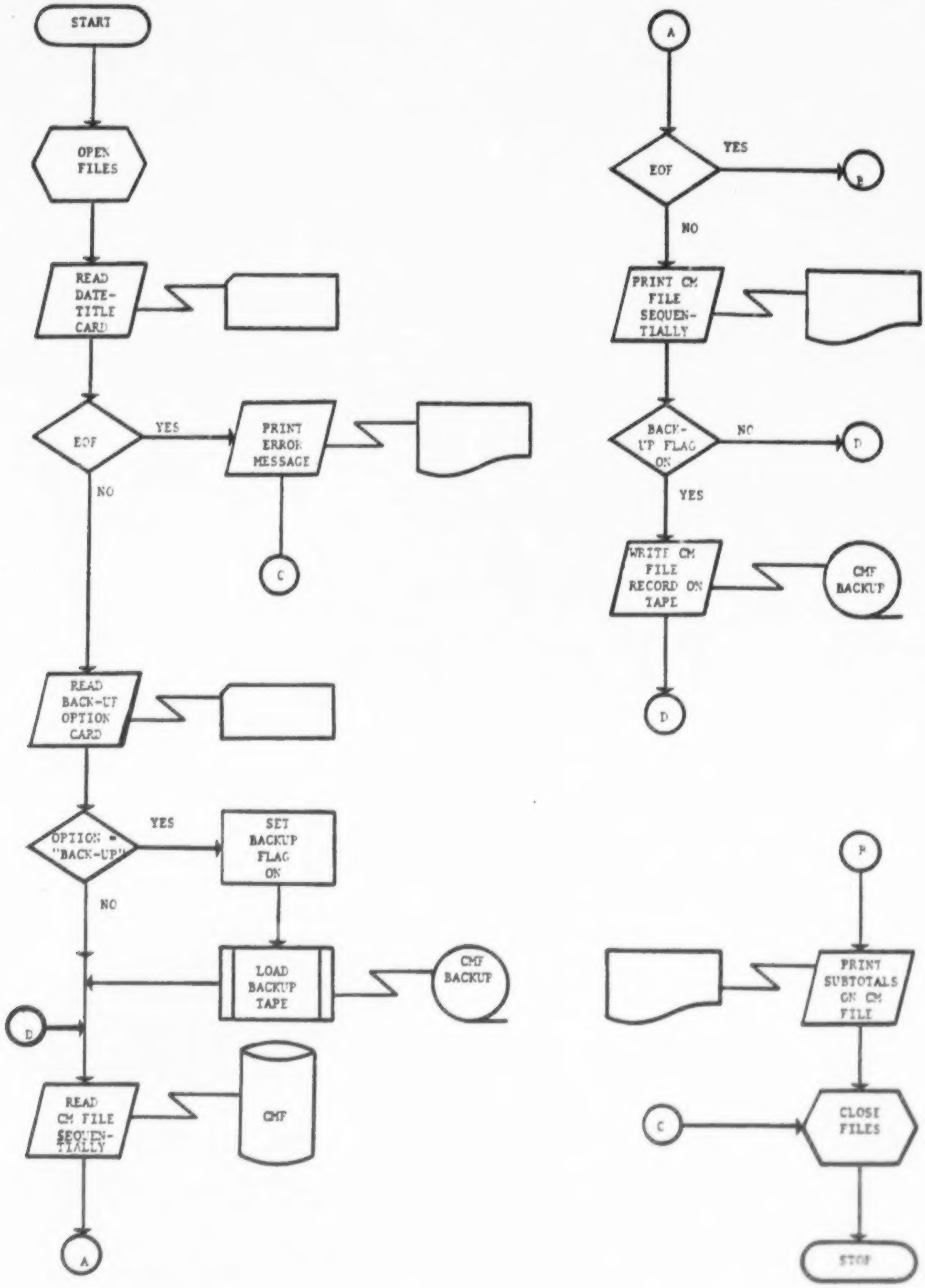

START
OPEN FILES
READ DATE-TITLE FILE
EOF
YES
PRINT MESSAGE
CLOSE FILES
STOP
NO
FILL HEADINGS
DIVIDE CURRENT-MONTH BY 12 GIVING YEARLY PERCENT
2
UTIL-CODE-HOLD = SPACES
YES
NO
NO-OF-UTILS-HOLD = 0
YES
MOVE TITLES HOLD
NO
MOVE TITLES
ZERO ACCUMULATORS
PRINT HEADINGS
READ SORTED FILE
EOF
YES
COMPUTE SUBTOTAL PERCENTAGE
SUM ACCTS BY LINE
WRITE FUND-BAL-REC
2
3
NO
FIRST-POS < 1
YES
NO
FIRST-POS > 6
3
NO
SECOND-POS < 5
YES
ADD AMOUNTS (1)+(3)+(4) TO REV-EXP-SUB (FIRST-POS,1,1)3+6
ADD AMOUNTS (1)+(3)+(4) TO REV-EXP-SUB (FIRST-POS,2,1)+3+6
3

FAMSFUBS


START
OPEN FILES
READ DATE-TITLE FILE
EOF
YES
NO
PRINT MESSAGE
CLOSE FILES
STOP
4
UTILITY CODE HOLD = SPACES
?
YES
NO
PRINT HEADINGS
UTIL-CODE-HOLD = SPACES
YES
CLOSE SORTED-FILE
OPEN SORTED-FILE
NO-OF-UTILS-HOLD = 0
YES
MOVE TITLES
NO
SUBTRACT 1 FROM NO-OF-UTILS-HOLD
MOVE TITLES
UTIL-CODE-HOLD = '1'
NO
CHANGE HEADINGS
ZERO ACCUMS
2

FAMSFUBS


2
PRINT HEADINGS
SUM UP FUNDS
3
SUM UP FUNDS BY FUNCTION
READ SORTED FILE
EOF
YES
NO
VERIFY MATCH CODE
NEW RECORD SET-UP
SUM UP INDIVIDUAL ACCOUNTS
SET UP PRINT LINES
PRINT ACCT LINE
PRINT SUBTOTAL
3
SET SUBSCRIPTS
PRINT ACCT-LINE SUB-TOTAL
I = 2
NO
3
YES
PRINT FINAL TOTALS
4

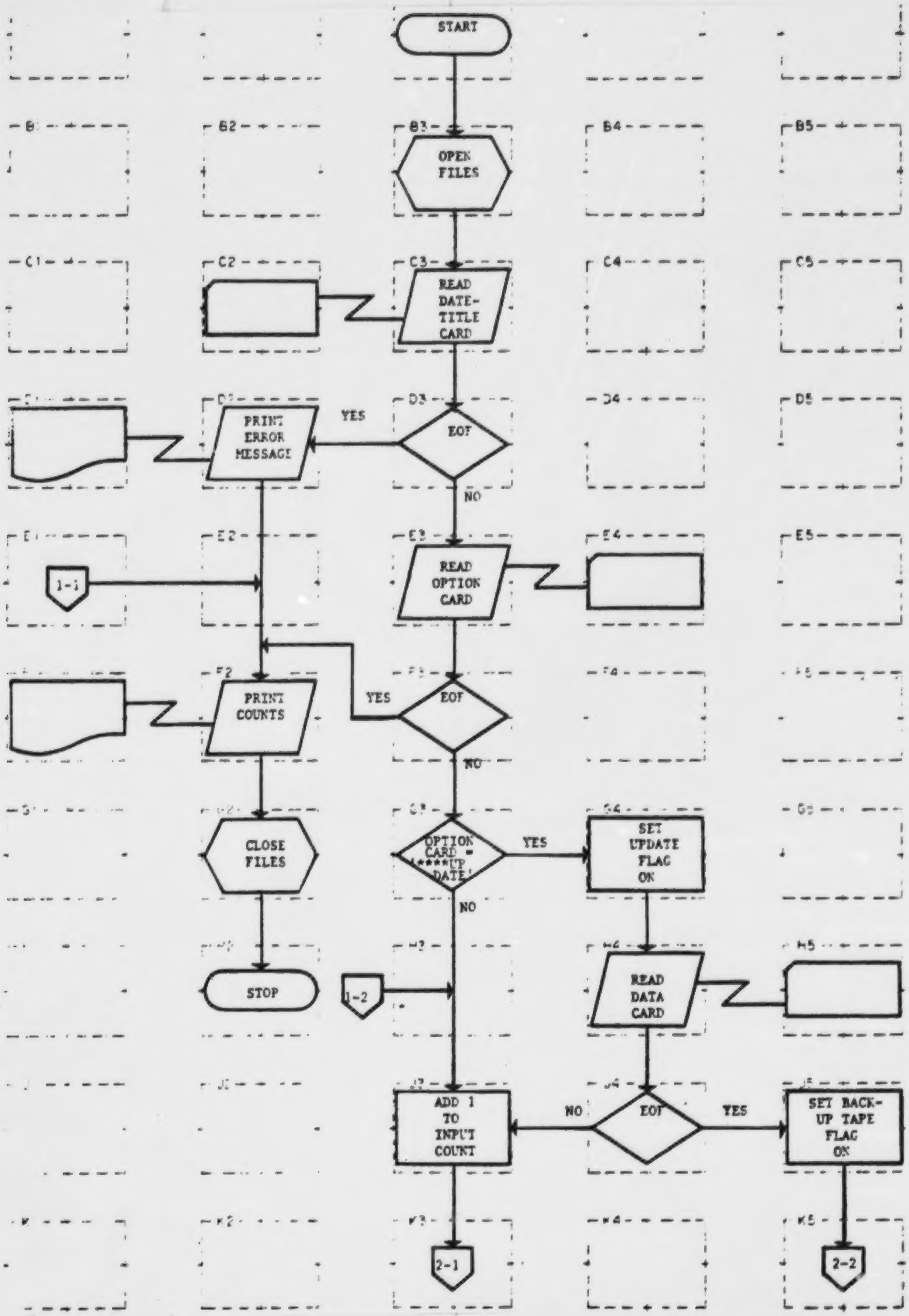

START
OPEN FILES
READ DATE-TITLE CARD
EOF
YES
PRINT ERROR MESSAGE
NO
C
READ BACK-UP OPTION CARD
OPTION = "BACK-UP"
YES
SET BACKUP FLAG ON
NO
LOAD BACKUP TAPE
CMF BACKUP
D
READ CM FILE SEQUEN-TIALLY
CMF
A
A
EOF
YES
B
NO
PRINT CM FILE SEQUEN-TIALLY
BACK-UP FLAG ON
NO
D
YES
WRITE CM FILE RECORD ON TAPE
CMF BACKUP
D
B
PRINT SUBTOTALS ON CM FILE
C
CLOSE FILES
STOP

BEGIN FIRST LINE OF TEXT HERE

TYPING GUIDE SHEET

CENTER OF PAGE

TOP OF IMAGE AREA


START
OPEN FILES
READ DATE-TITLE CARD
EOF
YES
PRINT ERROR MESSAGE
NO
1-1
READ OPTION CARD
EOF
YES
PRINT COUNTS
NO
CLOSE FILES
OPTION CARD = '****UPDATE'
YES
SET UPDATE FLAG ON
NO
STOP
1-2
READ DATA CARD
ADD 1 TO INPUT COUNT
NO
EOF
YES
SET BACK-UP TAPE FLAG ON
2-1
2-2

3/8"

AND ILLUSTRATIONS

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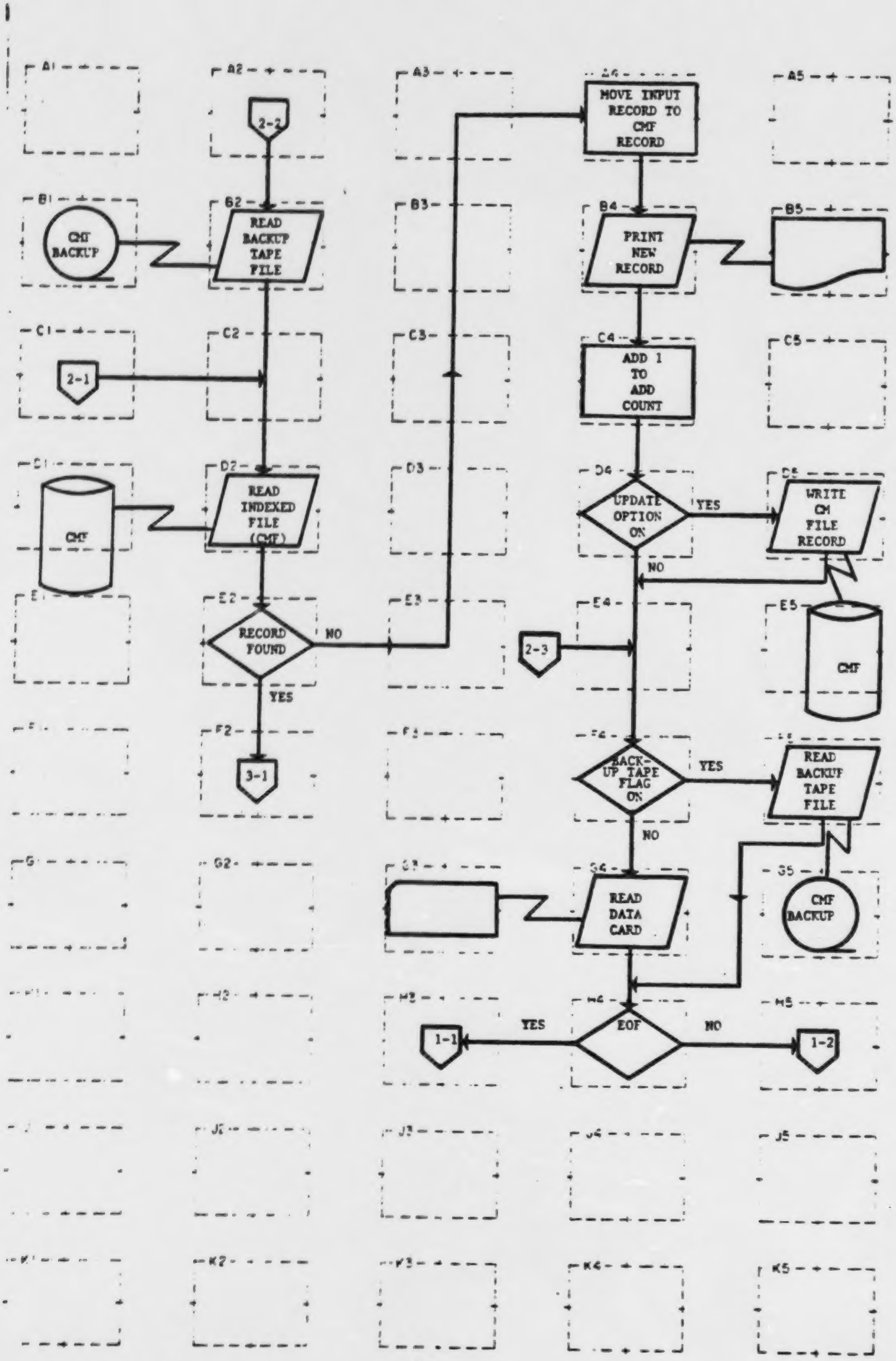
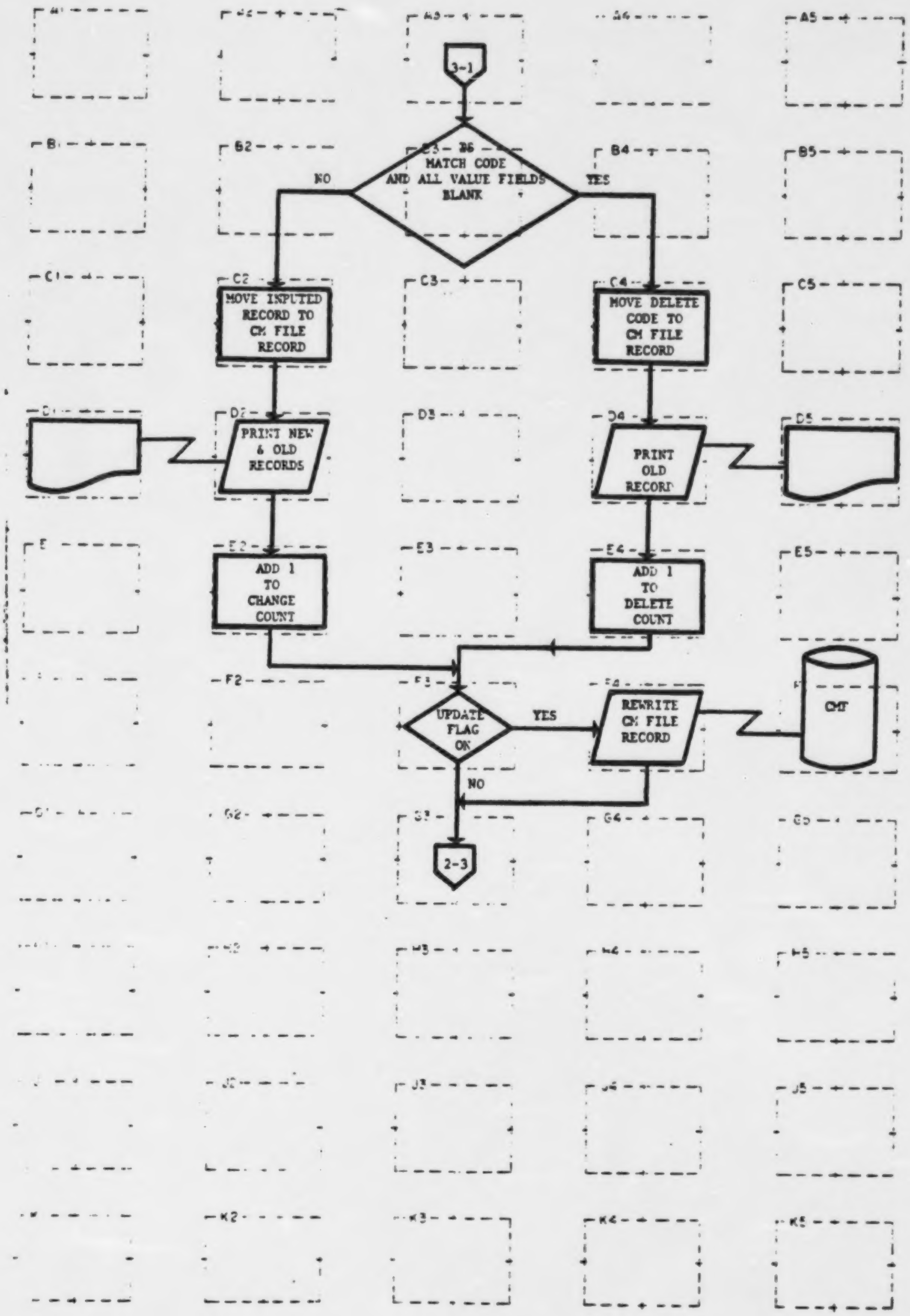

A1
A2
2-2
A3
A4
MOVE INPUT RECORD TO CMF RECORD
A5
B1
CMF BACKUP
B2
READ BACKUP TAPE FILE
B3
B4
PRINT NEW RECORD
B5
C1
2-1
C2
C3
C4
ADD 1 TO ADD COUNT
C5
D1
CMF
D2
READ INDEXED FILE (CMF)
D3
D4
UPDATE OPTION ON
YES
D5
WRITE CM FILE RECORD
NO
E2
RECORD FOUND
NO
YES
E3
E4
2-3
E5
CMF
F2
3-1
F4
BACK-UP TAPE FLAG ON
YES
READ BACKUP TAPE FILE
NO
G2
G3
G4
READ DATA CARD
G5
CMF BACKUP
H2
H3
H4
EOF
YES
NO
1-1
1-2
H5
J2
J3
J4
J5
K2
K3
K4
K5

3-1
B3 B6
MATCH CODE AND ALL VALUE FIELDS BLANK
NO
YES
MOVE INPUTED RECORD TO CM FILE RECORD
MOVE DELETE CODE TO CM FILE RECORD
PRINT NEW & OLD RECORDS
PRINT OLD RECORD
ADD 1 TO CHANGE COUNT
ADD 1 TO DELETE COUNT
UPDATE FLAG ON
YES
NO
REWRITE CM FILE RECORD
CMF
2-3

TYPING GUIDE SHEET
BEGIN FIRST LINE OF TEXT HERE
CENTER OF PAGE
TOP OF IMAGE AREA
DROPPED HEAD: BEGIN SECTIONS HERE
6-1/2"
9-1/8"
BEGIN LAST LINE OF TEXT
BOTTOM OF IMAGE AREA; OUTSIDE DIMENSION FOR TABLES AND ILLUSTRATIONS
3/8"
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(4-76)

SECTION 5

PROGRAM LISTINGS

The section includes a source listing of all the computer programs used in the Financial Reporting System. The programs are written in American Standard COBOL within an IBM 370 environment, and thus, each program listing will provide an identification division, an operationg environment division, a data format division, and a procedures division.

```
//          PGMNAME=WUASBFAT
//COB.SYSIN    DD  *
        IDENTIFICATION DIVISION.
        PROGRAM-ID. WUASBFAT.
        AUTHOR. ACT SYSTEMS, INC
                SUITE 200
                807 W MORSE BLVD
                WINTER PARK, FL 32789.
        DATE-WRITTEN. JUNE 1977.
        DATE-COMPILED.
        REMARKS. THIS PROGRAM EDITS THE FINANCIAL ACCOUNT
                 DESCRIPTION CARDS, FLAGS ANY DISCREPANCIES,
                 AND BUILDS THE FINANCIAL ACCOUNT TABLE FILE.
        ENVIRONMENT DIVISION.
        CONFIGURATION SECTION.
        SOURCE-COMPUTER. IBM-370.
        OBJECT-COMPUTER. IBM-370.
        SPECIAL-NAMES.
            C01 IS NEW-PAGE.
        INPUT-OUTPUT SECTION.
        FILE-CONTROL.
            SELECT CARD-IN
                ASSIGN TO UR-2540R-S-CARDIN
                ACCESS MODE IS SEQUENTIAL.
            SELECT FILE-SORT
                ASSIGN TO UT-3330-S-FILESORT
                ACCESS MODE IS SEQUENTIAL.
            SELECT SORTED-FILE
                ASSIGN TO UT-3330-S-SORTEDFI
                ACCESS MODE IS SEQUENTIAL.
            SELECT SPECIAL-ACCT-TABFI
                ASSIGN TO UT-3330-S-SATABFI
                ACCESS MODE IS SEQUENTIAL.
            SELECT PRINT-OUT
                ASSIGN TO UR-1403-S-PRINTOUT
                ACCESS MODE IS SEQUENTIAL.
            SELECT  FINANCIAL-ACCT-TABFI
                ASSIGN TO DA-3330-I-FATABFI
                ACCESS MODE IS SEQUENTIAL
                RECORD KEY IS FA-NUMBER.
        DATA DIVISION.
        FILE SECTION.
        FD  CARD-IN
            RECORD CONTAINS 80 CHARACTERS
            LABEL RECORDS ARE OMITTED
            DATA RECORD IS INPUT-RECS.
        01  INPUT-RECS              PIC X(80).
        01  DATE-CARD.
            05  DATE-IN      PIC X(18).
            05  TITLE-IN     PIC X(24).
```

```
    05  FILLER      PIC X(38).
SD  FILE-SORT
    RECORD CONTAINS 80 CHARACTERS
    DATA RECORD IS SORT-INPUT.
01  SORT-INPUT.
    05  SORT-FIRST-10   PIC X(10).
    05  FILLER          PIC X(70).
FD  SORTED-FILE
    RECORD CONTAINS 80 CHARACTERS
    LABEL RECORDS ARE STANDARD
    DATA RECORD IS INPUT-CARD.
01  INPUT-CARD.
    05  FA-NO       PIC X(10).
    05  OVFLOW1     PIC X.
    05  FA-NAME1    PIC X(20).
    05  OVFLOW2     PIC X.
    05  FA-NAME2    PIC X(20).
    05  OVFLOW3     PIC X.
    05  FN-TITLE    PIC XX.
    05  OVFLOW4     PIC X.
    05  GA-TITLE    PIC XX.
    05  OVFLOW5     PIC X.
    05  FA-INTERNAL PIC X(4).
    05  OVFLOW6     PIC X.
    05  FILLER      PIC X(16).
FD  PRINT-OUT
    RECORD CONTAINS 133 CHARACTERS
    LABEL RECORDS ARE OMITTED
    DATA RECORD IS PRINT-LINE.
01  PRINT-LINE      PIC X(133).
FD  FINANCIAL-ACCT-TABFI
    BLOCK CONTAINS 8 RECORDS
    RECORD CONTAINS 58 CHARACTERS
    LABEL RECORDS ARE STANDARD
    DATA RECORD IS FA-REC.
01  FA-REC.
    05  FA-NUMBER   PIC X(10).
    05  FA-NAME1    PIC X(20).
    05  FA-NAME2    PIC X(20).
    05  FN-TITLE    PIC XX.
    05  GA-TITLE    PIC XX.
    05  FA-INTERNAL PIC X(4).
FD  SPECIAL-ACCT-TABFI
    BLOCK CONTAINS 0 RECORDS
    LABEL RECORDS ARE STANDARD
    DATA RECORD IS SPEC-ACCT-REC.
01  SPEC-ACCT-REC.
    05  RECORD-COUNT.
        10  NO-OF-RECS  PIC 9(4).
        10  FILLER      PIC X(18).
    05  SPEC-ACCT OCCURS 1 TO 99 TIMES
        DEPENDING ON NO-OF-RECS
        ASCENDING KEY IS SA-NO INDEXED BY IA.
        10  SA-NO         PIC XX.
        10  SA-NAME       PIC X(20).
WORKING-STORAGE SECTION.
77  IFA       PIC 9 COMP.
77  ISA       PIC 9 COMP.
77  IND       PIC 9 COMP.
77  LAST-FA       PIC X(10) VALUE SPACES.
77  LINE-CT       PIC 9(4) COMP VALUE 0.
77  PAGE-NO       PIC 9(4) COMP VALUE 1.
77  MAX-LINE      PIC 99 COMP VALUE 56.
77  SEARCH-NO     PIC XX.
01  COLUMN-HEADING.
    05  FILLER PIC X(21) VALUE SPACES.
    05  FILLER PIC X(9)  VALUE 'ACCOUNT #'.
    05  FILLER PIC X(10) VALUE SPACES.
    05  FILLER PIC X(12) VALUE 'ACCOUNT NAME'.
    05  FILLER PIC X(34) VALUE SPACES.
    05  FILLER PIC X(18) VALUE 'FUND/ACCOUNT TITLE'.
    05  FILLER PIC X(7) VALUE SPACES.
    05  FILLER PIC X VALUE '#'.
    05  FILLER PIC X(21) VALUE SPACES.
01  DATE-LINE.
    05  FILLER  PIC X VALUE SPACE.
    05  FILLER  PIC X(6) VALUE 'DATE: '.
    05  DATE-1  PIC X(18).
    05  FILLER  PIC X(40) VALUE SPACES.
    05  FILLER  PIC X(3) VALUE 'FOR'.
    05  FILLER  PIC X(53) VALUE SPACES.
    05  FILLER  PIC X(5) VALUE 'PAGE'.
    05  PAGE-1  PIC ZZZ9.
    05  FILLER  PIC XX VALUE SPACES.
01  HEADING-LINE.
    05  FILLER  PIC X(51) VALUE SPACES.
    05  FILLER  PIC X(30) VALUE 'FINANCIAL ACCOUNT DESCRIPTIONS'.
    05  FILLER  PIC X(52) VALUE SPACES.
01  TITLE-LINE.
    05  FILLER  PIC X(54) VALUE SPACES.
    05  TITLE   PIC X(24).
    05  FILLER  PIC X(55) VALUE SPACES.
01  DATA-OUT.
    05  DATA-LINE OCCURS 2 TIMES.
        10  FILLER  PIC X(21).
        10  FA-NO.
            15  FA-NO-1  PIC XX.
            15  FILLER PIC X.
            15  FA-NO-2  PIC XX.
            15  FILLER PIC X.
            15  FA-NO-3   PIC X(4).
        10  FILLER  PIC X(5).
        10  FA-NAME PIC X(20).
        10  FILLER  PIC X(5).
        10  FA-ERR  PIC X(20).
        10  FILLER  PIC X(5).
        10  SA-NAME PIC X(20).
        10  FILLER  PIC X(5).
        10  SA-NO   PIC XX.
        10  FILLER  PIC X(5).
        10  SA-ERR  PIC X(10).
        10  FILLER  PIC X(5).
PROCEDURE DIVISION.
OPEN-FILES.
    OPEN INPUT CARD-IN, SPECIAL-ACCT-TABFI.
    OPEN OUTPUT PRINT-OUT, FINANCIAL-ACCT-TABFI.
READ-CARDIN.
    READ CARD-IN AT END GO TO CLOSE-ROUTINE.
FILL-HEADING.
    MOVE DATE-IN TO DATE-1.
    MOVE TITLE-IN TO TITLE.
SORT-ROUTINE.
    OPEN OUTPUT SORTED-FILE.
    SORT FILE-SORT ON ASCENDING KEY
        SORT-FIRST-10
    INPUT PROCEDURE READ-SORT-INPUT THRU
        READ-SORT-INPUT-END
    OUTPUT PROCEDURE WRITE-SORT-OUTPUT THRU
        WRITE-SORT-OUTPUT-END.
CLOSE-SORT-FILES.
    CLOSE SORTED-FILE, CARD-IN.
    OPEN INPUT SORTED-FILE.
PRINT-HEADING.
    PERFORM BLANK-LINE.
    WRITE PRINT-LINE BEFORE ADVANCING NEW-PAGE.
    MOVE HEADING-LINE TO PRINT-LINE.
    PERFORM WRITE-OUT.
    MOVE PAGE-NO TO PAGE-1.
    MOVE DATE-LINE TO PRINT-LINE.
    PERFORM WRITE-OUT.
    MOVE TITLE-LINE TO PRINT-LINE.
    PERFORM WRITE-OUT.
    PERFORM BLANK-LINE THRU WRITE-OUT.
    MOVE COLUMN-HEADING TO PRINT-LINE.
    PERFORM WRITE-OUT.
    PERFORM BLANK-LINE THRU WRITE-OUT.
READ-SPECIAL-ACCTS.
    READ SPECIAL-ACCT-TABFI AT END
        MOVE 'SPECIAL-ACCT-TABFI CONTAINS NO DATA' TO PRINT-LINE
        PERFORM WRITE-OUT
```

```
               GO TO CLOSE-ROUTINE.
       START-EDIT.
           READ SORTED-FILE AT END GO TO CLOSE-ROUTINE.
           MOVE 1 TO IFA, ISA.
           MOVE SPACES TO DATA-OUT.
       CHECK-ACCT-NO.
           IF FA-NO OF INPUT-CARD = SPACES
               MOVE 'BLANK ACCOUNT #' TO FA-ERR (IFA)
               MOVE 2 TO IFA.
           IF FA-NO OF INPUT-CARD NOT > LAST-FA
               MOVE 'SEQUENCE ERROR' TO FA-ERR (IFA)
               MOVE 2 TO IFA.
           MOVE FA-NO OF INPUT-CARD TO LAST-FA, FA-NO OF DATA-LINE (1),
               FA-NUMBER.
       CHECK-ACCT-NAME.
           IF FA-NAME1 OF INPUT-CARD = SPACES AND
               FA-NAME2 OF INPUT-CARD = SPACES
                   MOVE 'NO TEXT' TO FA-ERR (IFA)
                   MOVE 2 TO IFA.
           MOVE FA-NAME1 OF INPUT-CARD TO FA-NAME (1).
           MOVE FA-NAME2 OF INPUT-CARD TO FA-NAME (2).
       CHECK-OVFLOW.
           IF OVFLOW1 NOT = SPACE OR OVFLOW2 NOT = SPACE OR
               OVFLOW3 NOT = SPACE OR OVFLOW4 NOT = SPACE OR
               OVFLOW5 NOT = SPACE OR OVFLOW6 NOT = SPACE
                   MOVE 'FIELD OVERFUN' TO FA-ERR (IFA)
                   MOVE 2 TO IFA.
       CHECK-INTERNAL-ACCT.
           EXAMINE FA-INTERNAL OF INPUT-CARD REPLACING ALL ' ' BY 0.
           IF FA-INTERNAL OF INPUT-CARD NOT NUMERIC
               MOVE 'NOT NUMERIC' TO FA-ERR (IFA)
               MOVE 2 TO IFA.
           MOVE FA-INTERNAL OF INPUT-CARD TO FA-NO-3 (2).
       SEARCH-SPEC-ACCTS.
           MOVE 1 TO IND.
           MOVE FN-TITLE OF INPUT-CARD TO SEARCH-NO, FA-NO-1 (2).
           PERFORM SEARCH-ROUTINE.
           MOVE 2 TO IND.
           MOVE GA-TITLE OF INPUT-CARD TO SEARCH-NO, FA-NO-2 (2).
           PERFORM SEARCH-ROUTINE.
       CHECK-ERRORS.
           IF IFA < 2 AND ISA < 2
               PERFORM FILL-DATA.
           MOVE 1 TO IND.
           PERFORM WRITE-DATA 2 TIMES.
           PERFORM BLANK-LINE THRU WRITE-OUT.
           PERFORM PAGE-OVFLOW.
           GO TO START-EDIT.
       SEARCH-ROUTINE.
           SET IA TO 1.
           SEARCH ALL SPEC-ACCT AT END
               MOVE 'NO TITLE FOUND' TO SA-NAME OF DATA-LINE (IND)
               MOVE 2 TO ISA
               MOVE ALL '*' TO SA-ERR (IND)
               MOVE SEARCH-NO TO SA-NO OF DATA-LINE (IND)
           WHEN SA-NO OF SPEC-ACCT (IA) = SEARCH-NO
               MOVE CORR SPEC-ACCT (IA) TO DATA-LINE (IND).
       WRITE-DATA.
           MOVE DATA-LINE (IND) TO PRINT-LINE.
           PERFORM WRITE-OUT.
           ADD 1 TO IND.
       FILL-DATA.
           MOVE CORR INPUT-CARD TO FA-REC.
           WRITE FA-REC INVALID KEY
               MOVE 'INVALID KEY' TO FA-ERR (IFA).
       BLANK-LINE.
           MOVE SPACES TO PRINT-LINE.
       WRITE-OUT.
           WRITE PRINT-LINE BEFORE ADVANCING 1.
           ADD 1 TO LINE-CT.
       PAGE-OVFLOW.
           IF LINE-CT > MAX-LINE
               ADD 1 TO PAGE-NO
               MOVE 0 TO LINE-CT
               PERFORM PRINT-HEADING.
      *
      *    INPUT AND OUTPUT SORT ROUTINES
      *
       READ-SORT-INPUT.
           READ CARD-IN AT END
               GO TO READ-SORT-INPUT-END.
           RELEASE SORT-INPUT FROM INPUT-RECS.
           GO TO READ-SORT-INPUT.
       READ-SORT-INPUT-END.
           EXIT.
       WRITE-SORT-OUTPUT.
           RETURN FILE-SORT RECORD INTO INPUT-CARD AT END
               GO TO WRITE-SORT-OUTPUT-END.
           WRITE INPUT-CARD.
           GO TO WRITE-SORT-OUTPUT.
       WRITE-SORT-OUTPUT-END.
           EXIT.
      *
       CLOSE-ROUTINE.
           CLOSE CARD-IN, PRINT-OUT, SPECIAL-ACCT-TABFI,
               SORTED-FILE, FINANCIAL-ACCT-TABFI.
       PROGRAM-END.
           STOP RUN.
1*
//
/*EOF
```

```
//         PGMNAME=FAMSBCMF
       IDENTIFICATION DIVISION.
       PROGRAM-ID. FAMSBCMF.
       AUTHOR. ACT SYSTEMS, INC
                 SUITE 200
                 807 W MORSE BLVD
                 WINTER PARK, FL 32789.
       DATE-WRITTEN. MARCH 1979.
       DATE-COMPILED.
       REMARKS.     THIS PROGRAM  READS THE FINANCIAL ACCOUNT
                    TABLE FILE AND BUILDS THE CROSS MATRIX
                    FILE, FOR THE FAMS SYSTEM.
       ENVIRONMENT DIVISION.
       CONFIGURATION SECTION.
       SOURCE-COMPUTER. IBM-370-168.
       OBJECT-COMPUTER. IBM-370-168.
       SPECIAL-NAMES.
           C01 IS NEW-PAGE.
       INPUT-OUTPUT SECTION.
       FILE-CONTROL.
           SELECT CARD-IN
               ASSIGN TO UR-2540R-S-CARDIN
               ACCESS MODE IS SEQUENTIAL.
           SELECT CROSS-MATRIX-FILE
               ASSIGN TO DA-3330-I-CMFILE
               ACCESS MODE IS SEQUENTIAL
               RECORD KEY IS CM-NUMBER.
           SELECT FINANCIAL-ACCT-TABFI
               ASSIGN TO DA-3330-I-FATABFI
               ACCESS MODE IS SEQUENTIAL
               RECORD KEY IS FA-NUMBER.
           SELECT SPECIAL-ACCT-FUND-ACCTS
               ASSIGN TO UT-3330-S-SATABFI
               ACCESS MODE IS SEQUENTIAL.
           SELECT PRINT-OUT
               ASSIGN TO UR-1403-S-PRINTOUT
               ACCESS MODE IS SEQUENTIAL.
       DATA DIVISION.
       FILE SECTION.
       FD  CARD-IN
           RECORD CONTAINS 80 CHARACTERS
           LABEL RECORDS ARE OMITTED
           DATA RECORD IS DATE-CARD.
       01  DATE-CARD.
           05  DATE-IN       PIC X(18).
           05  TITLE-IN      PIC X(24).
           05  FILLER        PIC X(38).
       01  UTILITY-DESC-CARD.
           05  UTILITY-CODE-IN   PIC X.
           05  FILLER            PIC X(79).
```

```
FD  FINANCIAL-ACCT-TABFI
    BLOCK CONTAINS 8 RECORDS
    RECORD CONTAINS 58 CHARACTERS
    LABEL RECORDS ARE STANDARD
    DATA RECORD IS FA-REC.
01  FA-REC.
    05  FA-NUMBER            PIC X(10).
    05  FA-NAME     PIC X(20) OCCURS 2 TIMES.
    05  FUND-NO              PIC XX.
    05  ACCT-NO              PIC XX.
    05  FA-INTERNAL-MATCH PIC X(4).
FD  SPECIAL-ACCT-FUND-ACCTS
    BLOCK CONTAINS 0 RECORDS
    LABEL RECORDS ARE STANDARD
    DATA RECORD IS SPEC-ACCT-REC-FUNDS.
01  SPEC-ACCT-REC-FUNDS.
    05  REC-COUNT.
        10  NUM-OF-RECS  PIC 9(4).
        10  FILLER       PIC X(18).
    05  FUND-ACCTS OCCURS 1 TO 99 TIMES
        DEPENDING ON NUM-OF-RECS
        ASCENDING KEY IS FUND-ACCT-NO INDEXED BY IE.
        10 FUND-ACCT-NO  PIC XX.
        10  FUND-ACCT-NAME  PIC X(20).
FD  CROSS-MATRIX-FILE
    RECORD CONTAINS 80 CHARACTERS
    BLOCK CONTAINS 5 RECORDS
    LABEL RECORDS ARE STANDARD
    DATA RECORD IS CM-REC.
01  CM-REC.
    05  FA-INTERNAL          PIC X(4).
    05  CM-NUMBER.
        10  FA-NO   PIC X(10).
    05  FUND-NO              PIC XX.
    05  ACCT-NO              PIC XX.
    05  FILLER               PIC XX.
    05  AMOUNTS.
        10  AMTS             PIC S9(8)V99 OCCURS 6 TIMES.
FD  PRINT-OUT
    RECORD CONTAINS 133 CHARACTERS
    LABEL RECORDS ARE OMITTED
    DATA RECORD IS PRINT-LINE.
01  PRINT-LINE.
    05  PRINT-DATA           PIC X(132).
    05  FILLER               PIC X.
WORKING-STORAGE SECTION.
77  LINE-CT                  PIC 9(4) VALUE 0.
77  PAGE-NO                  PIC 9(4) VALUE 1.
77  MAX-LINE                 PIC 99 VALUE 56.
77  IB                       PIC 9.
```

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77  IC                     PIC 99.
77  FUND-ACCT-HOLD         PIC XX.
77  I                      PIC 99.
77  J                      PIC 9.
77  POS-ZERO               PIC S9(8)V99 VALUE +0.
01  HEADING-LINE.
    05  FILLER             PIC X(54) VALUE SPACES.
    05  FILLER   PIC X(23) VALUE 'CROSS MATRIX FILE INPUT'.
    05  FILLER  PIC X(56) VALUE SPACES.
01  DATE-LINE.
    05  FILLER  PIC X VALUE SPACE.
    05  FILLER  PIC X(6) VALUE 'DATE: '.
    05  DATE-1  PIC X(18).
    05  FILLER             PIC X(39) VALUE SPACES.
    05  FILLER  PIC X(3) VALUE 'FOR'.
    05  FILLER             PIC X(54) VALUE SPACES.
    05  FILLER  PIC X(4) VALUE 'PAGE'.
    05  PAGE-1  PIC ZZZ9.
    05  FILLER  PIC X(4) VALUE SPACES.
01  TITLE-LINE.
    05  FILLER  PIC X(54) VALUE SPACES.
    05  TITLE   PIC X(24).
    05  FILLER  PIC X(55) VALUE SPACES.
01  COL-HEADING-1.
    05  FILLER              PIC X(7)  VALUE SPACES.
    05  FILLER              PIC X(18) VALUE 'FINANCIAL  ACCOUNT'.
    05  FILLER              PIC X(15) VALUE SPACES.
    05  FILLER              PIC X(9)  VALUE 'FRS MATCH'.
    05  FILLER              PIC X(5)  VALUE SPACES.
    05  FILLER              PIC X(20) VALUE 'FINANCIAL FUND TYPES'.
    05  FILLER              PIC X(13) VALUE SPACES.
    05  FILLER              PIC X(23) VALUE 'FINANCIAL ACCOUNT TYPES
-                                         ''.
    05  FILLER              PIC X(22) VALUE SPACES.
01  COL-HEADING-2.
    05  FILLER              PIC X(6)  VALUE SPACES.
    05  FILLER              PIC X(6)  VALUE 'NUMBER'.
    05  FILLER              PIC X(10) VALUE SPACES.
    05  FILLER              PIC X(4)  VALUE 'NAME'.
    05  FILLER              PIC X(16) VALUE SPACES.
    05  FILLER              PIC X(4)  VALUE 'CODE'.
    05  FILLER              PIC X(8)  VALUE SPACES.
    05  FILLER              PIC X(6)  VALUE 'NUMBER'.
    05  FILLER              PIC X(7)  VALUE SPACES.
    05  FILLER              PIC X(4)  VALUE 'NAME'.
    05  FILLER              PIC X(16) VALUE SPACES.
    05  FILLER              PIC X(6)  VALUE 'NUMBER'.
    05  FILLER              PIC X(7)  VALUE SPACES.
    05  FILLER              PIC X(4)  VALUE 'NAME'.
    05  FILLER              PIC X(28) VALUE SPACES.
```

```
01  DATA-LINE.
    05  FILLER              PIC X(5).
    05  FA-NO               PIC X(10).
    05  FILLER              PIC X.
    05  FA-NAME             PIC X(20).
    05  FILLER              PIC X(6).
    05  FA-INTERNAL         PIC X(4).
    05  FILLER              PIC X(10).
    05  FUND-ACCOUNT-TYPES OCCURS 2 TIMES.
        10  FUND-NO         PIC X(2).
        10  FILLER          PIC X(3).
        10  FUND-NAME       PIC X(20).
        10  FILLER          PIC X(8).
        05  FILLER          PIC X(11).
PROCEDURE DIVISION.
OPEN-FILES.
        OPEN INPUT CARD-IN, FINANCIAL-ACCT-TABFI,
            SPECIAL-ACCT-FUND-ACCTS.
        OPEN OUTPUT PRINT-OUT, CROSS-MATRIX-FILE.
READ-CARDIN.
    READ CARD-IN AT END
        MOVE ' NO DATE TITLE CARD' TO PRINT-LINE
        PERFORM WRITE-OUT
        GO TO CLOSE-ROUTINE.
FILL-HEADING.
        MOVE DATE-IN TO DATE-1.
        MOVE TITLE-IN TO TITLE.
PRINT-HEADING.
    PERFORM BLANK-LINE.
    WRITE PRINT-LINE BEFORE ADVANCING NEW-PAGE.
    MOVE HEADING-LINE TO PRINT-LINE.
    PERFORM WRITE-OUT.
    MOVE PAGE-NO TO PAGE-1.
    MOVE DATE-LINE TO PRINT-LINE.
    PERFORM WRITE-OUT.
    MOVE TITLE-LINE TO PRINT-LINE.
    PERFORM WRITE-OUT.
    PERFORM BLANK-LINE THRU WRITE-OUT.
    MOVE COL-HEADING-1 TO PRINT-LINE.
    PERFORM WRITE-OUT.
    MOVE COL-HEADING-2 TO PRINT-LINE.
    PERFORM WRITE-OUT.
    PERFORM BLANK-LINE THRU WRITE-OUT.
READ-SPECIAL-ACCTS.
    READ SPECIAL-ACCT-FUND-ACCTS AT END
        MOVE 'SPECIAL-ACCT-FUND-ACCTS CONTAINS NO DATA' TO
                        PRINT-LINE
        PERFORM WRITE-OUT
        GO TO CLOSE-ROUTINE.
START-EDIT.
```

```
    READ FINANCIAL-ACCT-TABFI AT END
        GO TO CLOSE-ROUTINE.
FILL-RECORD.
    MOVE SPACES TO DATA-LINE, CM-REC.
    PERFORM MOVE-IN-ZEROS VARYING J
        FROM 1 BY 1 UNTIL J > 6.
FIND-FA-INFO.
    MOVE FA-NUMBER TO FA-NO OF CM-NUMBER, FA-NO OF DATA-LINE.
    MOVE FA-NAME OF FA-REC (1) TO FA-NAME OF DATA-LINE.
MOVE-FUND-ACCTS-OUT.
    MOVE 1 TO IB.
    MOVE FUND-NO OF FA-REC TO FUND-ACCT-HOLD,
        FUND-NO OF CM-REC.
    PERFORM SEARCH-FUND-ACCTS.
    MOVE 2 TO IB.
    MOVE ACCT-NO OF FA-REC TO FUND-ACCT-HOLD,
        ACCT-NO OF CM-REC.
    PERFORM SEARCH-FUND-ACCTS.
MOVE-FRS-INTERNAL-NO-OUT.
    MOVE FA-INTERNAL-MATCH TO FA-INTERNAL OF CM-REC,
        FA-INTERNAL OF DATA-LINE.
WRITE-CMF-REC.
    WRITE CM-REC INVALID KEY
        MOVE ' INVALID CMF KEY ' TO FA-NAME OF FA-REC (1)
        MOVE SPACES TO FA-NAME OF FA-REC (2).
WRITE-PRINT-LINE.
    MOVE FA-NAME OF FA-REC (1) TO FA-NAME OF DATA-LINE.
    MOVE DATA-LINE TO PRINT-DATA.
    PERFORM WRITE-OUT.
    MOVE SPACES TO DATA-LINE.
    IF FA-NAME OF FA-REC (2) NOT = SPACES
        MOVE FA-NAME OF FA-REC (2) TO
        FA-NAME OF DATA-LINE
        MOVE DATA-LINE TO PRINT-DATA
        PERFORM WRITE-OUT.
    PERFORM BLANK-LINE THRU PAGE-OVFLOW.
    GO TO START-EDIT.
SEARCH-FUND-ACCTS.
    MOVE FUND-ACCT-HOLD TO FUND-NO OF FUND-ACCOUNT-TYPES (IB).
    SET IE TO 1.
    SEARCH ALL FUND-ACCTS AT END
        MOVE 'INVALID FUND/ACCT' TO FUND-NAME OF DATA-LINE (IB)
    WHEN FUND-ACCT-NO OF FUND-ACCTS (IE) =  FUND-ACCT-HOLD
        MOVE FUND-ACCT-NAME OF FUND-ACCTS (IE)
            TO FUND-NAME OF FUND-ACCOUNT-TYPES (IB).
BLANK-LINE.
    MOVE SPACES TO PRINT-LINE.
WRITE-OUT.
    WRITE PRINT-LINE BEFORE ADVANCING 1.
    ADD 1 TO LINE-CT.
```

```
         PAGE-OVFLOW.
              IF LINE-CT > MAX-LINE
                   ADD 1 TO PAGE-NO
                   MOVE 0 TO LINE-CT
                   PERFORM PRINT-HEADING.
         MOVE-IN-ZEROS.
              MOVE POS-ZERO TO AMTS (J).
         CLOSE-ROUTINE.
              CLOSE PRINT-OUT, SPECIAL-ACCT-FUND-ACCTS,
                   FINANCIAL-ACCT-TABFI, CROSS-MATRIX-FILE, CARD-IN.
         PROGRAM-END.
              STOP RUN.
/*
//
/*EOF
```

```
//         PGMNAME=WUASSCER
//COB.SYSIN   DD *
       IDENTIFICATION DIVISION.
       PROGRAM-ID. WUASSCER.
       AUTHOR. ACT SYSTEMS, INC
               SUITE 200
               807 W MORSE BLVD
               WINTER PARK, FLA 32789 .
       DATE-WRITTEN. NOV 1979.
       DATE-COMPILED.
       REMARKS. THIS PROGRAM EDITS THE SERVICE CONTRACT DATA
                CARDS, TOTALS ALL COSTS, FLAGS ANY DISCREPANCIES.
       ENVIRONMENT DIVISION.
       CONFIGURATION SECTION.
       SOURCE-COMPUTER. IBM-370.
       OBJECT-COMPUTER. IBM-370.
       SPECIAL-NAMES.
           C01 IS NEW-PAGE.
       INPUT-OUTPUT  SECTION.
       FILE-CONTROL.
           SELECT CARD-IN
             ASSIGN TO UR-2540R-S-CARDIN
             ACCESS MODE IS SEQUENTIAL.
           SELECT PRINT-OUT
             ASSIGN TO UR-1403-S-PRINTOUT
             ACCESS MODE IS SEQUENTIAL.
           SELECT FINANCIAL-ACCT-TABFI
               ASSIGN TO DA-3330-I-FATABFI
               ACCESS MODE IS RANDOM
               NOMINAL KEY IS FA-NOMINAL
               RECORD KEY IS FA-NUMBER.
           SELECT FINANCIAL-COST-ALLOCATION
               ASSIGN TO UT-3330-S-FICALFI
               ACCESS MODE IS SEQUENTIAL.
       DATA DIVISION.
       FILE SECTION.
       FD  CARD-IN
           RECORD CONTAINS 80 CHARACTERS
           LABEL RECORDS ARE OMITTED
           DATA RECORD IS INPUT-RECS.
       01  INPUT-RECS.
           02  SOURCE-CODE-NO    PIC X.
           02  FILLER            PIC X.
           02  FRS-UTIL-CODE     PIC X.
           02  FILLER            PIC X.
           02  FORM-NO-IN        PIC X(6).
           02  FILLER            PIC X.
           02  DATE-DATA-IN      PIC X(6).
           02  FILLER            PIC X.
           02  CARD-TYPE-IN      PIC X.
```

```
     02  FILLER           PIC X.
     02  QUANTITY-IN-ALPHA PIC X(6).
     02  QUANTITY-IN REDEFINES QUANTITY-IN-ALPHA PIC S9(5)V9.
     02  FILLER           PIC X.
     02  STOCK-NO-IN      PIC X(8).
     02  FILLER           PIC X.
     02  TOTAL-COST-IN    PIC X(10).
     02  TOT-COST-IN REDEFINES TOTAL-COST-IN PIC S9(8)V99.
     02  FILLER           PIC X.
     02  METER-CHARGE     PIC X.
     02  FILLER           PIC X.
     02  DESC-IN          PIC X(30).
     02  FILLER           PIC X.
 01  INPUT-RECS-1.
     02  FILLER           PIC X(20).
     02  VALUES-IN-ALPHA  PIC X(60).
 01  INPUT-RECS-2.
     02  FILLER           PIC X(20).
     02  VALUES-IN        PIC S9(4)V99 OCCURS 10 TIMES.
******************************************************************
*
*    THE ABOVE VALUES-IN ARRAY IS AS FOLLOWS.
*
*    1   TRACTOR
*    2   COMPRESSOR
*    3   SERVICE TRUCK
*    4   DUMP TRUCK
*    5   PICK-UP TRUCK
*    6   TAP MACHINE
*    7   LABOR CHARGE
*    8   SUB TOTAL
*    9   OVER HEAD
*    10  TOTAL
*
******************************************************************
 01  DATE-CARD.
     02  DATE-IN       PIC X(18).
     02  TITLE-IN      PIC X(24).
     02  FILLER        PIC X(38).
 FD  PRINT-OUT
     RECORD CONTAINS 133 CHARACTERS
     LABEL RECORDS ARE OMITTED
     DATA RECORD IS PRINT-LINE.
 01  PRINT-LINE.
     05  PRINT-DATA       PIC X(132).
     05  FILLER           PIC X.
 FD  FINANCIAL-ACCT-TABFI
     BLOCK CONTAINS 8 RECORDS
     RECORD CONTAINS 58 CHARACTERS
     LABEL RECORDS ARE STANDARD
```

```
           DATA RECORD IS FA-REC.
       01  FA-REC.
           05  FA-NUMBER         PIC X(10).
           05  FA-NAME           PIC X(20) OCCURS 2 TIMES.
           05  FA-FUND-NO        PIC XX.
           05  FA-ACCT-TYPE      PIC XX.
           05  FA-MATCH-CODE     PIC X(4).
       FD  FINANCIAL-COST-ALLOCATION
           BLOCK CONTAINS 5 RECORDS
           RECORD CONTAINS 100 CHARACTERS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS DISK-OUT.
       01  DISK-OUT.
           05  DISK-ACCT         PIC X(10).
           05  DISK-COST-CNTR    PIC X(4).
           05  DISK-FUND-NO      PIC XX.
           05  DISK-ACCT-TYPE    PIC XX.
           05  FILLER            PIC XX.
           05  DISK-AMOUNT       PIC S9(8)V99.
           05  DISK-ITEM-NO      PIC X(8).
           05  DISK-QUANTITY     PIC S9(5)V9.
           05  DISK-SOURCE-DOC-DATE  PIC X(6).
           05  DISK-SOURCE-CODE PIC X.
           05  DISK-SOURCE-DOC-NO   PIC X(11).
           05  DISK-DESC-FIELD   PIC X(30).
           05  FILLER            PIC X(8).
       01  DATE-TITLE-REC.
           05  FILLER            PIC X.
           05  SORT-SEQUENCE     PIC X.
           05  DISK-DATE         PIC X(18).
           05  FILLER            PIC X(6).
           05  DISK-TITLE-1      PIC X(24).
           05  DISK-TITLE-2      PIC X(24).
           05  FILLER            PIC X(26).
       WORKING-STORAGE SECTION.
       77  SOURCE-CODE           PIC X VALUE '3'.
       77  SEARCH-NO             PIC XX VALUE SPACES.
       77  LINE-CT               PIC 99 VALUE 0.
       77  PAGE-CT               PIC 9(4) VALUE 0.
       77  TOTAL-ACCUM           PIC S9(8)V99 VALUE 0.
       77  CREDIT-TOTAL          PIC S9(8)V99 VALUE 0.
       77  DEBIT-TOTAL           PIC S9(8)V99 VALUE 0.
       77  FORM-NO-HOLD          PIC X(6) VALUE SPACES.
       77  DATE-HOLD             PIC X(6) VALUE SPACES.
       77  VALUE-HOLD            PIC S9(8)V99 VALUE 0.
       77  I                     PIC 9 VALUE 0.
       77  J                     PIC 9 VALUE 0.
       77  MAX-LINE              PIC 99 VALUE 56.
       77  FA-NOMINAL            PIC X(10).
       77  DEBIT-ACCT-HOLD       PIC X(10).
```

```
77  CREDIT-ACCT-HOLD        PIC X(10).
77  PRINT-FORM-FLAG         PIC X VALUE '1'.
    88  FLAG-ON             VALUE '1'.
    88  FLAG-OFF            VALUE '0'.
77  NON-METER-MATERIALS-FLAG PIC X VALUE '0'.
    88  YES-CHARGES         VALUE '1'.
    88  NO-CHARGES          VALUE '0'.
77  SUB-UTIL-FLAG           PIC X VALUE '0'.
    88  YES-SUB-UTIL        VALUE '1'.
    88  NO-SUB-UTIL         VALUE '0'.
01  HEADING-1.
    02  FILLER              PIC X(58) VALUE SPACES.
    02  FILLER              PIC X(16) VALUE 'SERVICE CONTRACT'.
    02  FILLER              PIC X(59) VALUE SPACES.
01  HEADING-2.
    02  FILLER              PIC X VALUE SPACES.
    02  FILLER              PIC X(13) VALUE 'DATE ENDING: '.
    02  DATE-OUT            PIC X(18) VALUE SPACES.
    02  FILLER              PIC X(33) VALUE SPACES.
    02  FILLER              PIC X(3) VALUE 'FOR'.
    02  FILLER              PIC X(53) VALUE SPACES.
    02  FILLER              PIC X(5)  VALUE  'PAGE '.
    02  PAGE-OUT            PIC ZZZ9.
    02  FILLER              PIC X(3) VALUE SPACES.
01  HEADING-3.
    02  FILLER              PIC X(54) VALUE SPACES.
    02  TITLE-OUT           PIC X(24) VALUE SPACES.
    02  FILLER              PIC X(55) VALUE SPACES.
01  HEADING-4.
    02  FILLER              PIC X(15) VALUE 'CONTRACT NUMBER'.
    02  FILLER              PIC X(4)  VALUE SPACES.
    02  FILLER              PIC X(4) VALUE 'DATE'.
    02  FILLER              PIC X(4) VALUE SPACES.
    02  FILLER              PIC X(14) VALUE 'ACCOUNT NUMBER'.
    02  FILLER              PIC X(3)  VALUE SPACES.
    02  FILLER              PIC X(12) VALUE 'STOCK NUMBER'.
    02  FILLER              PIC X(3)  VALUE SPACES.
    02  FILLER              PIC X(8)  VALUE 'QUANTITY'.
    02  FILLER              PIC X(3)  VALUE SPACES.
    02  FILLER              PIC X(10) VALUE 'TOTAL COST'.
    02  FILLER              PIC X(2)  VALUE SPACES.
    02  FILLER              PIC X(13) VALUE 'TOTAL CREDITS'.
    02  FILLER              PIC X(2)  VALUE SPACES.
    02  FILLER              PIC X(12) VALUE 'TOTAL DEBITS'.
    02  FILLER              PIC X(8)  VALUE SPACES.
    02  FILLER              PIC X(8) VALUE 'COMMENTS'.
    02  FILLER              PIC X(7)  VALUE SPACES.
01  DATA-LINE.
    02  FILLER              PIC X(4)  VALUE SPACES.
    02  CONTRACT-NO-OUT     PIC X(6).
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          02  FILLER            PIC X(8)  VALUE SPACES.
          02  DATE-DATA-OUT     PIC X(6).
          02  FILLER            PIC X(5) VALUE SPACES.
          02  ACCT-OUT          PIC X(10).
          02  FILLER            PIC X(7)  VALUE SPACES.
          02  STOCK-NO-OUT      PIC X(8).
          02  FILLER            PIC X(7)  VALUE SPACES.
          02  QUANTITY-OUT      PIC ZZZ9.
          02  FILLER            PIC X(4)  VALUE SPACES.
          02  TOTAL-COST-OUT    PIC -(8).--.
          02  FILLER            PIC X(2)  VALUE SPACES.
          02  CREDIT-OUT        PIC -(8).--.
          02  FILLER            PIC X(3)  VALUE SPACES.
          02  DEBIT-OUT         PIC -(8).--.
          02  FILLER            PIC X(5)  VALUE SPACES.
          02  COMMENT           PIC X(20) VALUE SPACES.
       01  SECONDARY-RECORD.
          05  SAVE-ACCT         PIC X(10).
          05  SAVE-COST-CNTR    PIC X(4).
          05  SAVE-FUND-NO      PIC XX.
          05  SAVE-ACCT-TYPE    PIC XX.
          05  FILLER            PIC XX.
          05  SAVE-AMOUNT       PIC S9(8)V99.
          05  SAVE-ITEM-NO      PIC X(8).
          05  SAVE-QUANTITY     PIC S9(5)V9.
          05  SAVE-DATE         PIC X(6).
          05  SAVE-SOURCE-CODE  PIC X.
          05  SAVE-DOC-NO       PIC X(11).
          05  SAVE-DESC         PIC X(30).
          05  FILLER            PIC X(8).
       01  ERROR-CODE.
          02  ERR-CODE OCCURS 4 TIMES PIC X.
       01  ERROR-LIST.
              05  ERR-LIST1  PIC X(80) VALUE      'ACCOUNT # NOT FOUND
-                                                 'DR & CR NOT EQUAL
-                                                 '
-
                                               'VALUE IN NOT NUMERIC'.
          05  ERR-LIST REDEFINES ERR-LIST1 PIC X(20) OCCURS 4 TIMES.
       PROCEDURE DIVISION.
       OPEN-FILES.
           OPEN INPUT   CARD-IN, FINANCIAL-ACCT-TABFI,
                OUTPUT PRINT-OUT, FINANCIAL-COST-ALLOCATION.
       READ-TITLE-CARD.
           READ CARD-IN AT END GO TO WRITE-FINAL-TOTALS.
           MOVE SPACES TO DISK-OUT.
           MOVE DATE-IN TO DATE-OUT, DISK-DATE.
           MOVE TITLE-IN TO TITLE-OUT, DISK-TITLE-1.
           MOVE SOURCE-CODE TO SORT-SEQUENCE.
           WRITE DISK-OUT.
           MOVE SPACES TO PRINT-LINE, DISK-OUT.
```

```
    MOVE ' THE FOLLOWING CARDS HAVE A INVALID SOURCE CODE'
        TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
HOUSEKEEPING.
    MOVE SPACES TO ERROR-CODE.
WRITE-HEADINGS.
    MOVE 0 TO LINE-CT.
    ADD 1 TO PAGE-CT.
    MOVE PAGE-CT TO PAGE-OUT.
    PERFORM MOVE-SPACES.
    WRITE PRINT-LINE BEFORE ADVANCING NEW-PAGE.
    MOVE HEADING-1 TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    MOVE HEADING-2 TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    MOVE HEADING-3 TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
    MOVE HEADING-4 TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
READ-RECORDS.
    READ CARD-IN AT END GO TO WRITE-FINAL-TOTALS.
EDIT-RECORDS.
    MOVE SPACES TO DATA-LINE, DISK-OUT,
        SECONDARY-RECORD.
    IF CARD-TYPE-IN = '2'
        GO TO EDIT-CARD-2.
CHECK-UTIL-CODE.
    IF FRS-UTIL-CODE NOT = SPACES
        MOVE '1' TO SUB-UTIL-FLAG
        GO TO CHECK-SUB-UTIL-CODE.
    IF METER-CHARGE NOT = SPACES
            MOVE '346-00     ' TO DEBIT-ACCT-HOLD
    ELSE    MOVE '345-00     ' TO DEBIT-ACCT-HOLD
            MOVE '1' TO NON-METER-MATERIALS-FLAG.
    MOVE '154-40     ' TO CREDIT-ACCT-HOLD.
    GO TO TEST-VALUES.
CHECK-SUB-UTIL-CODE.
    MOVE '421-32     ' TO DEBIT-ACCT-HOLD.
    MOVE '154-40     ' TO CREDIT-ACCT-HOLD.
TEST-VALUES.
    IF FORM-NO-HOLD = SPACES
        MOVE FORM-NO-IN TO FORM-NO-HOLD
        MOVE DATE-DATA-IN TO DATE-HOLD.
    EXAMINE QUANTITY-IN-ALPHA REPLACING ALL ' ' BY '0'.
    EXAMINE TOTAL-COST-IN REPLACING ALL ' ' BY '0'.
    MOVE FORM-NO-IN TO CONTRACT-NO-OUT, DISK-SOURCE-DOC-NO,
        SAVE-DOC-NO.
    MOVE DATE-DATA-IN TO DATE-DATA-OUT,
        DISK-SOURCE-DOC-DATE, SAVE-DATE.
    IF FLAG-OFF
        MOVE SPACES TO CONTRACT-NO-OUT, DATE-DATA-OUT.
    MOVE '0' TO PRINT-FORM-FLAG.
    MOVE SOURCE-CODE TO DISK-SOURCE-CODE, SAVE-SOURCE-CODE.
    IF QUANTITY-IN-ALPHA NOT NUMERIC
        MOVE ZEROS TO QUANTITY-IN-ALPHA.
    MOVE QUANTITY-IN TO QUANTITY-OUT, DISK-QUANTITY,
        SAVE-QUANTITY.
    MOVE STOCK-NO-IN TO STOCK-NO-OUT, DISK-ITEM-NO,
        SAVE-ITEM-NO.
    MOVE DESC-IN TO DISK-DESC-FIELD, SAVE-DESC.
    MOVE ZEROS TO DISK-COST-CNTR, SAVE-COST-CNTR.
    IF TOTAL-COST-IN NOT NUMERIC
        MOVE '1' TO ERR-CODE (4)
        MOVE ZEROS TO TOTAL-COST-IN.
    MOVE TOT-COST-IN TO TOTAL-COST-OUT,
        DISK-AMOUNT, SAVE-AMOUNT.
    MOVE ZEROS TO CREDIT-OUT, DEBIT-OUT.
    MOVE DEBIT-ACCT-HOLD TO ACCT-OUT, DISK-ACCT,
        FA-NOMINAL.
CHECK-VALID-ACCOUNTS.
    READ FINANCIAL-ACCT-TABFI INVALID KEY
        MOVE '1' TO ERR-CODE (1).
    IF ERR-CODE (1) NOT = '1'
        MOVE FA-FUND-NO TO DISK-FUND-NO
        MOVE FA-ACCT-TYPE TO DISK-ACCT-TYPE.
WRITE-FIRST-DISK-REC.
    IF ERROR-CODE = SPACES
        WRITE DISK-OUT.
    MOVE SECONDARY-RECORD TO DISK-OUT.
PRINT-FIRST-LINE.
    IF ERROR-CODE NOT = SPACES
        PERFORM MOVE-IN-ERRS
    ELSE MOVE DATA-LINE TO PRINT-LINE
        PERFORM PRINT-LINE-OUT.
RETRIEVE-SECONDARY-ACCTS.
    MOVE CREDIT-ACCT-HOLD TO ACCT-OUT,
        DISK-ACCT, FA-NOMINAL.
    PERFORM CHECK-VALID-ACCOUNTS.
    MULTIPLY -1 BY TOT-COST-IN GIVING TOTAL-COST-OUT,
        DISK-AMOUNT.
WRITE-SECOND-DISK-REC.
    PERFORM WRITE-FIRST-DISK-REC.
PRINT-SECOND-LINE.
    MOVE SPACES TO CONTRACT-NO-OUT, DATE-DATA-OUT.
    PERFORM PRINT-FIRST-LINE.
RETURN-TO-READ-RECORDS.
    GO TO READ-RECORDS.
```

```
      *
      *
      *         PROCESS CARD TYPE 2
      *
      *
       EDIT-CARD-2.
           EXAMINE VALUES-IN-ALPHA REPLACING ALL ' ' BY '0'.
           IF YES-SUB-UTIL
               GO TO CARD-2-SUB-UTIL.
           IF YES-CHARGES
                   MOVE '345-00     ' TO DEBIT-ACCT-HOLD
           ELSE    MOVE '346-00     ' TO DEBIT-ACCT-HOLD.
           MOVE '680-30     ' TO CREDIT-ACCT-HOLD.
           GO TO COMPUTE-EQUIPTMENT-CHGS.
       CARD-2-SUB-UTIL.
           MOVE '421-32     ' TO DEBIT-ACCT-HOLD.
           MOVE '680-30     ' TO CREDIT-ACCT-HOLD.
       COMPUTE-EQUIPTMENT-CHGS.
           PERFORM WRITE-EQUIPTMENT-CHGS VARYING I
               FROM 1 BY 1 UNTIL I > 6.
       COMPUTE-OVER-HEAD.
           IF VALUES-IN (9) = 0
               MULTIPLY VALUES-IN (8) BY .1 GIVING VALUES-IN (9)
               ADD VALUES-IN (8) VALUES-IN (9) GIVING VALUES-IN (10).
       SUBTRACT-LABOR-FROM-TOTALS.
           SUBTRACT VALUES-IN (7) FROM VALUES-IN (8).
           SUBTRACT VALUES-IN (7) FROM VALUES-IN (10).
       WRITE-OVER-HEAD.
           MOVE SPACES TO DATA-LINE, DISK-OUT.
           MOVE SECONDARY-RECORD TO DISK-OUT.
           MOVE VALUES-IN (9) TO TOTAL-COST-OUT, DISK-AMOUNT.
           MOVE DEBIT-ACCT-HOLD TO ACCT-OUT, DISK-ACCT, FA-NOMINAL.
           PERFORM CHECK-VALID-ACCOUNTS.
           PERFORM WRITE-FIRST-DISK-REC.
           PERFORM PRINT-FIRST-LINE.
           MULTIPLY -1 BY VALUES-IN (9) GIVING
               TOTAL-COST-OUT, DISK-AMOUNT.
           MOVE '680-31     ' TO ACCT-OUT, DISK-ACCT, FA-NOMINAL.
           PERFORM CHECK-VALID-ACCOUNTS.
           PERFORM WRITE-FIRST-DISK-REC.
           PERFORM PRINT-FIRST-LINE.
       WRITE-TOTALS.
           IF YES-SUB-UTIL
               MOVE '1010-40    ' TO DEBIT-ACCT-HOLD
               MOVE '1020-10    ' TO CREDIT-ACCT-HOLD
           ELSE MOVE '1020-40    ' TO DEBIT-ACCT-HOLD
                MOVE '1020-50    ' TO CREDIT-ACCT-HOLD.
           MOVE SECONDARY-RECORD TO DISK-OUT.
           MOVE VALUES-IN (10) TO TOTAL-COST-OUT, DISK-AMOUNT.
           MOVE DEBIT-ACCT-HOLD TO ACCT-OUT, DISK-ACCT, FA-NOMINAL.
           PERFORM CHECK-VALID-ACCOUNTS.
           PERFORM WRITE-FIRST-DISK-REC.
           PERFORM PRINT-FIRST-LINE.
           MULTIPLY -1 BY VALUES-IN (10) GIVING
               TOTAL-COST-OUT, DISK-AMOUNT.
           MOVE CREDIT-ACCT-HOLD TO ACCT-OUT, DISK-ACCT, FA-NOMINAL.
           PERFORM CHECK-VALID-ACCOUNTS.
           PERFORM WRITE-FIRST-DISK-REC.
           PERFORM PRINT-FIRST-LINE.
       CLEAR-FLAGS.
           MOVE '0' TO NON-METER-MATERIALS-FLAG, SUB-UTIL-FLAG.
           MOVE '1' TO PRINT-FORM-FLAG.
           MOVE SPACES TO ERROR-CODE.
       WRITE-SUB-TOTALS.
           MOVE SPACES TO PRINT-DATA, DATA-LINE.
           MOVE VALUES-IN (10) TO DEBIT-OUT.
           ADD VALUES-IN (10) TO DEBIT-TOTAL.
           MULTIPLY -1 BY VALUES-IN (10) GIVING VALUES-IN (10).
           MOVE VALUES-IN (10) TO CREDIT-OUT.
           ADD VALUES-IN (10) TO CREDIT-TOTAL.
           MOVE DATA-LINE TO PRINT-DATA.
           PERFORM PRINT-LINE-OUT.
           PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
           PERFORM PRINT-LINE-OUT.
           GO TO READ-RECORDS.
      *
      *
      *    SUBROUTINES
      *
      *
       WRITE-EQUIPTMENT-CHGS.
           MOVE SPACES TO DATA-LINE, DISK-OUT.
           MOVE FORM-NO-IN TO DISK-SOURCE-DOC-NO, SAVE-DOC-NO.
           MOVE DATE-DATA-IN TO DISK-SOURCE-DOC-DATE, SAVE-DATE.
           MOVE SOURCE-CODE TO DISK-SOURCE-CODE, SAVE-SOURCE-CODE.
           MOVE VALUES-IN (I) TO TOTAL-COST-OUT, DISK-AMOUNT,
               SAVE-AMOUNT.
           MOVE DEBIT-ACCT-HOLD TO ACCT-OUT, DISK-ACCT, FA-NOMINAL.
           PERFORM CHECK-VALID-ACCOUNTS.
           PERFORM WRITE-FIRST-DISK-REC.
           PERFORM PRINT-FIRST-LINE.
           MOVE CREDIT-ACCT-HOLD TO ACCT-OUT, DISK-ACCT, FA-NOMINAL.
           MOVE SPACES TO COMMENT.
           MULTIPLY -1 BY VALUES-IN (I) GIVING TOTAL-COST-OUT,
               DISK-AMOUNT.
           PERFORM CHECK-VALID-ACCOUNTS.
           PERFORM WRITE-FIRST-DISK-REC.
           PERFORM PRINT-FIRST-LINE.
       MOVE-IN-ERRS.
           PERFORM MOVE-IN-ERRORS VARYING I
```

```
                   FROM 1 BY 1 UNTIL I > 4.
           MOVE-IN-ERRORS.
               IF ERR-CODE (I) NOT = SPACES
                   MOVE ERR-LIST (I) TO COMMENT
                   MOVE DATA-LINE TO PRINT-LINE
                   PERFORM PRINT-LINE-OUT
                   MOVE SPACES TO DATA-LINE ERR-CODE (I).
           MOVE-SPACES.
               MOVE SPACES TO PRINT-LINE.
           PRINT-LINE-OUT.
               WRITE PRINT-LINE BEFORE ADVANCING 1.
               ADD 1 TO LINE-CT.
               IF LINE-CT > MAX-LINE
                   PERFORM WRITE-HEADINGS.
           WRITE-FINAL-TOTALS.
               MOVE SPACES TO DATA-LINE.
               MOVE CREDIT-TOTAL TO CREDIT-OUT.
               MOVE DEBIT-TOTAL TO DEBIT-OUT.
               MOVE DATA-LINE TO PRINT-LINE.
               PERFORM PRINT-LINE-OUT.
           CLOSE-FILES.
               CLOSE FINANCIAL-ACCT-TABFI,
                   FINANCIAL-COST-ALLOCATION, PRINT-OUT.
           E-O-J.
               STOP RUN.
/*
//
/*EOF
```

```
//           PGMNAME=WUASMTER
//COB.SYSIN  DD *
       IDENTIFICATION DIVISION.
       PROGRAM-ID. WUASMTER.
       AUTHOR. ACT SYSTEMS, INC
               SUITE 200
               807 W MORSE BLVD
               WINTER PARK, FLA 32789 .
       DATE-WRITTEN. OCT 5 1977.
       DATE-COMPILED.
       REMARKS. THIS PROGRAM EDITS THE MISCELLANEOUS TRANSACTIONS
                CARDS, TOTALS ALL COSTS, FLAGS ANY DISCREPANCIES.
       ENVIRONMENT DIVISION.
       CONFIGURATION SECTION.
       SOURCE-COMPUTER. IBM-370.
       OBJECT-COMPUTER. IBM-370.
       SPECIAL-NAMES.
           C01 IS NEW-PAGE.
       INPUT-OUTPUT  SECTION.
       FILE-CONTROL.
           SELECT CARD-IN
             ASSIGN TO UR-2540R-S-CARDIN
             ACCESS MODE IS SEQUENTIAL.
           SELECT FILE-SORT
             ASSIGN TO UT-3330-S-FILESORT
             ACCESS MODE IS SEQUENTIAL.
           SELECT SORTED-FILE
             ASSIGN TO UT-3330-S-SORTEDFI
             ACCESS MODE IS SEQUENTIAL.
           SELECT PRINT-OUT
             ASSIGN TO UR-1403-S-PRINTOUT
             ACCESS MODE IS SEQUENTIAL.
           SELECT FINANCIAL-ACCT-TABFI
               ASSIGN TO DA-3330-I-FATABFI
               ACCESS MODE IS RANDOM
               NOMINAL KEY IS FA-NOMINAL
               RECORD KEY IS FA-NUMBER.
           SELECT COST-CNTR-TABFI
               ASSIGN TO DA-3330-I-CCTABFI
               ACCESS MODE IS RANDOM
               NOMINAL KEY IS CC-NOMINAL
               RECORD KEY IS CC-NUMBER.
           SELECT SPECIAL-ACCT-TABFI
               ASSIGN TO DA-3330-S-SATABFI
               ACCESS MODE IS SEQUENTIAL.
           SELECT FINANCIAL-COST-ALLOCATION
               ASSIGN TO UT-3330-S-FICALFI
               ACCESS MODE IS SEQUENTIAL.
       DATA DIVISION.
       FILE SECTION.
```

```
FD  CARD-IN
    RECORD CONTAINS 80 CHARACTERS
    LABEL RECORDS ARE OMITTED
    DATA RECORD IS INPUT-CARD.
01  INPUT-CARD.
    02  ID1 PIC X.
    02  ID2 PIC X(79).
01  DATE-CARD.
    02  DATE-IN        PIC X(18).
    02  TITLE-IN       PIC X(24).
    02  FILLER         PIC X(38).
SD  FILE-SORT
    RECORD CONTAINS 80 CHARACTERS
    DATA RECORD IS SORT-INPUT.
01  SORT-INPUT.
    02  S-SOURCE-CODE-NO PIC X.
    02  FILLER           PIC X.
    02  S-ENTRY-NO       PIC X(3).
    02  FILLER           PIC X(8).
    02  S-ACCT-NO        PIC X(10).
    02  FILLER           PIC X(57).
FD  SORTED-FILE
    RECORD CONTAINS 80 CHARACTERS
    LABEL RECORDS ARE STANDARD
    DATA RECORD IS INPUT-RECS.
01  INPUT-RECS.
    02  SOURCE-CODE-NO   PIC X.
    02  FILLER           PIC X.
    02  ENTRY-NO         PIC X(3).
    02  FILLER           PIC X.
    02  M-T-DATE         PIC X(6).
    02  FILLER           PIC X.
    02  ACCT-IN.
        05  FILLER       PIC X(8).
        05  FRS-UTIL-CODE PIC X.
        05  FILLER       PIC X.
    02  FILLER           PIC X.
    02  COST-CTR-IN.
        05  CC-FIRST-2-DIGITS  PIC XX.
        05  CC-SECOND-2-DIGITS PIC XX.
    02  FILLER           PIC X.
    02  INPUT-AMTS.
        05  AMOUNT-IN    PIC X(10).
        05  AMT-IN REDEFINES AMOUNT-IN PIC S9(8)V99.
    02  FILLER           PIC X.
    02  ITEM-NO-IN       PIC X(8).
    02  FILLER           PIC X.
    02  QUANTITY-IN-ALPHA PIC X(6).
    02  QUANTITY-IN REDEFINES QUANTITY-IN-ALPHA PIC S9(5)V9.
    02  FILLER           PIC X.
    02  DESC-IN              PIC X(24).
FD  PRINT-OUT
    RECORD CONTAINS 133 CHARACTERS
    LABEL RECORDS ARE OMITTED
    DATA RECORD IS PRINT-LINE.
01  PRINT-LINE            PIC X(133).
FD  COST-CNTR-TABFI
    BLOCK CONTAINS 8 RECORDS
    RECORD CONTAINS 30 CHARACTERS
    LABEL RECORDS ARE STANDARD
    DATA RECORD IS CC-REC.
01  CC-REC.
    02  CC-NUMBER            PIC 9(4).
    02  CC-NAME              PIC X(13) OCCURS 2 TIMES.
FD  FINANCIAL-ACCT-TABFI
    BLOCK CONTAINS 8 RECORDS
    RECORD CONTAINS 58 CHARACTERS
    LABEL RECORDS ARE STANDARD
    DATA RECORD IS FA-REC.
01  FA-REC.
    05  FA-NUMBER            PIC X(10).
    05  FA-NAME              PIC X(20) OCCURS 2 TIMES.
    05  FA-FUND-NO           PIC XX.
    05  FA-ACCT-TYPE         PIC XX.
    05  FILLER               PIC X(4).
FD  SPECIAL-ACCT-TABFI
    BLOCK CONTAINS 0 RECORDS
    LABEL RECORDS ARE STANDARD
    DATA RECORD IS COST-CENTERS.
01  COST-CENTERS.
    05  RECORD-COUNT.
        10  NO-OF-RECS       PIC 9(4).
        10  FILLER           PIC X(18).
    05  COST-CNTRS OCCURS 1 TO 99 TIMES
        DEPENDING ON NO-OF-RECS
        ASCENDING KEY IS CC-SIZE-2
        INDEXED BY CC.
        10  CC-SIZE-2        PIC X(2).
        10  CC-SIZE-4        PIC X(4).
        10  FILLER           PIC X(16).
FD  FINANCIAL-COST-ALLOCATION
    BLOCK CONTAINS 5 RECORDS
    RECORD CONTAINS 100 CHARACTERS
    LABEL RECORDS ARE STANDARD
    DATA RECORD IS DISK-OUT.
01  DISK-OUT.
    05  DISK-ACCT            PIC X(10).
    05  DISK-COST-CNTR       PIC X(4).
    05  DISK-FUND-NO         PIC XX.
    05  DISK-ACCT-TYPE       PIC XX.
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          05  FILLER             PIC XX.
          05  DISK-AMOUNT        PIC S9(8)V99.
          05  DISK-ITEM-NO       PIC X(8).
          05  DISK-QUANITY       PIC S9(5)V9.
          05  DISK-SOURCE-DOC-DATE PIC X(6).
          05  DISK-SOURCE-CODE PIC X.
          05  DISK-SOURCE-DOC-NO PIC X(11).
          05  DISK-DESC-FIELD    PIC X(30).
          05  FILLER             PIC X(8).
       01 DATE-TITLE-REC.
          05  FILLER             PIC X.
          05  SORT-SEQUENCE      PIC X.
          05  DISK-DATE          PIC X(18).
          05  FILLER             PIC X(6).
          05  DISK-TITLE-1       PIC X(24).
          05  DISK-TITLE-2       PIC X(24).
          05  FILLER             PIC X(26).
       WORKING-STORAGE SECTION.
       77  SOURCE-CODE           PIC X VALUE '5'.
       77  SEARCH-NO             PIC XX VALUE SPACES.
       77  LINE-CT               PIC 99 VALUE 0.
       77  PAGE-CT               PIC 9(4) VALUE 0.
       77  CR-AMT-ACCUM          PIC S9(8)V99 VALUE 0.
       77  DB-AMT-ACCUM          PIC S9(8)V99 VALUE 0.
       77  BALANCE-AMOUNTS       PIC S9(8)V99 VALUE 0.
       77  CR-TOTAL              PIC S9(8)V99 VALUE 0.
       77  DB-TOTAL              PIC S9(8)V99 VALUE 0.
       77  ENTRY-NO-HOLD         PIC X(3) VALUE ZEROS.
       77  ACCT-HOLD             PIC X(10) VALUE ZERO.
       77  I                     PIC 9 VALUE 0.
       77  MAX-LINE              PIC 99 VALUE 56.
       77  FA-NOMINAL            PIC X(10).
       77  CC-NOMINAL            PIC X(4).
       01  HEADING-1.
           02  FILLER            PIC X(49) VALUE SPACES.
           02  FILLER            PIC X(33) VALUE 'MISCELLANEOUS TRANSACTI
      -                                     'ONS REPORT'.
           02  FILLER            PIC X(51) VALUE SPACES.
       01  HEADING-2.
           02  FILLER            PIC X VALUE SPACES.
           02  FILLER            PIC X(13) VALUE 'DATE ENDING: '.
           02  DATE-OUT          PIC X(18) VALUE SPACES.
           02  FILLER            PIC X(33) VALUE SPACES.
           02  FILLER            PIC X(3) VALUE 'FOR'.
           02  FILLER            PIC X(53) VALUE SPACES.
           02  FILLER            PIC X(5)  VALUE  'PAGE '.
           02  PAGE-OUT          PIC ZZZ9.
           02  FILLER            PIC X(3) VALUE SPACES.
       01  HEADING-3.
           02  FILLER            PIC X(54) VALUE SPACES.
      02  TITLE-OUT        PIC X(24) VALUE SPACES.
      02  FILLER           PIC X(55) VALUE SPACES.
  01  HEADING-4.
      02  FILLER           PIC X(2)  VALUE SPACES.
      02  FILLER           PIC X(12) VALUE 'ENTRY NUMBER'.
      02  FILLER           PIC X(5)  VALUE SPACES.
      02  FILLER           PIC X(14) VALUE 'ACCOUNT NUMBER'.
      02  FILLER           PIC X(5)  VALUE SPACES.
      02  FILLER           PIC X(11) VALUE 'COST CENTER'.
      02  FILLER           PIC X(9)  VALUE SPACES.
      02  FILLER           PIC X(6) VALUE 'AMOUNT'.
      02  FILLER           PIC X(6)  VALUE SPACES.
      02  FILLER           PIC X(12) VALUE 'CREDIT TOTAL'.
      02  FILLER           PIC X(6)  VALUE SPACES.
      02  FILLER           PIC X(11) VALUE 'DEBIT TOTAL'.
      02  FILLER           PIC X(14) VALUE SPACES.
      02  FILLER           PIC X(7)  VALUE 'COMMENT'.
      02  FILLER           PIC X(13) VALUE SPACES.
  01  DATA-LINE.
      02  FILLER           PIC X(7).
      02  ENTRY-NO-OUT     PIC X(3).
      02  FILLER           PIC X(12).
      02  ACCT-OUT         PIC X(10).
      02  FILLER           PIC X(10).
      02  COST-CTR-OUT     PIC X(4).
      02  FILLER           PIC X(8).
      02  AMOUNT-OUT       PIC Z(8).ZZCR.
      02  FILLER           PIC XX.
      02  CR-TOTAL-OUT     PIC Z(8).ZZCR.
      02  FILLER           PIC X(5).
      02  DB-TOTAL-OUT     PIC -(8).--.
      02  FILLER           PIC X(7).
      02  COMMENT          PIC X(25) VALUE SPACES.
      02  FILLER           PIC X(3).
  01  ERROR-CODE.
      02  ERR-CODE OCCURS 8 TIMES PIC X.
  01  ERROR-LIST.
      02  ERR-LIST-A.
          05  ERR-LIST1 PIC X(100) VALUE 'ACCOUNT NUMBER
-                            'NOT FOUND      NO. 1
-                  'COST CENTER NOT NUMERIC NO. 2
-                  'COST CENTER NOT FOUND   NO. 3
-                'AMOUNT NOT NUMERIC      '.NO.4
          05  ERR-LIST2 PIC X(100) VALUE 'TOTAL AMOUNT
-                  'NOT NUMERIC             NO.5
-                 'CR AMTS NOT = TO CR TOTALNO.6
-                 'DB AMTS NOT = TO DB TOTALNO.7
-               'TOTALS DO NOT BALANCE    '.NO. 8
      02  ERR-LIST-B REDEFINES ERR-LIST-A.
          05  ERR-LIST OCCURS 8 TIMES PIC X(25).
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01  SAVE-DISK.
    05  SAVE-ACCT          PIC X(10).
    05  FILLER             PIC X(90).
PROCEDURE DIVISION.
OPEN-FILES.
    OPEN INPUT CARD-IN.
    OPEN OUTPUT PRINT-OUT, SORTED-FILE,
                FINANCIAL-COST-ALLOCATION.
READ-TITLE-CARD.
    READ CARD-IN AT END GO TO WRITE-FINAL-TOTALS.
    MOVE SPACES TO DISK-OUT.
    MOVE DATE-IN TO DATE-OUT, DISK-DATE.
    MOVE TITLE-IN TO TITLE-OUT, DISK-TITLE-1.
    MOVE SOURCE-CODE TO SORT-SEQUENCE.
    WRITE DISK-OUT.
    MOVE SPACES TO DISK-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
    MOVE ' THE FOLLOWING CARDS HAVE A INVALID SOURCE CODE'
        TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
SORT-RECORDS.
    SORT FILE-SORT ON ASCENDING KEY
        S-ENTRY-NO
        S-ACCT-NO
    INPUT PROCEDURE READ-SORT-INPUT
        THRU READ-SORT-INPUT-END
    OUTPUT PROCEDURE WRITE-SORT-OUTPUT
        THRU WRITE-SORT-OUTPUT-END.
CLOSE-SORT-FILES.
    CLOSE SORTED-FILE, CARD-IN.
    OPEN INPUT SORTED-FILE, FINANCIAL-ACCT-TABFI,
               COST-CNTR-TABFI, SPECIAL-ACCT-TABFI.
HOUSEKEEPING.
    MOVE SPACES TO ERROR-CODE.
    READ SPECIAL-ACCT-TABFI AT END
        MOVE 'COST CENTER TABLE CONTAINS NO DATA' TO
        PRINT-LINE,
        PERFORM PRINT-LINE-OUT
        GO TO CLOSE-FILES.
WRITE-HEADINGS.
    MOVE 0 TO LINE-CT.
    ADD 1 TO PAGE-CT.
    MOVE PAGE-CT TO PAGE-OUT.
    PERFORM MOVE-SPACES.
    WRITE PRINT-LINE BEFORE ADVANCING NEW-PAGE.
    MOVE HEADING-1 TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    MOVE HEADING-2 TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    MOVE HEADING-3 TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
    MOVE HEADING-4 TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
READ-RECORDS.
    READ SORTED-FILE AT END GO TO WRITE-FINAL-TOTALS.
EDIT-RECORDS.
    EXAMINE INPUT-AMTS REPLACING ALL SPACES BY ZEROS.
    EXAMINE COST-CTR-IN REPLACING ALL SPACES BY ZEROS.
    IF ENTRY-NO NOT = TO ENTRY-NO-HOLD THEN
        MOVE ENTRY-NO TO ENTRY-NO-HOLD, ENTRY-NO-OUT
    ELSE MOVE SPACES TO ENTRY-NO-OUT.
    IF ACCT-IN NOT = ACCT-HOLD THEN
        MOVE ACCT-IN TO ACCT-HOLD, ACCT-OUT, FA-NOMINAL,
        READ FINANCIAL-ACCT-TABFI INVALID KEY
            MOVE '1' TO ERR-CODE (1).
    IF ERR-CODE (1) = SPACES
        MOVE FA-FUND-NO TO DISK-FUND-NO
        MOVE FA-ACCT-TYPE TO DISK-ACCT-TYPE.
    MOVE ACCT-IN TO DISK-ACCT, ACCT-OUT.
    IF COST-CTR-IN NOT NUMERIC
        MOVE '1' TO ERR-CODE (2)
        MOVE SPACES TO COST-CTR-IN, DISK-COST-CNTR.
    IF COST-CTR-IN = TO ZEROS THEN
        MOVE SPACES TO COST-CTR-IN, DISK-COST-CNTR
    ELSE PERFORM FIND-COST-CNTR.
    IF AMOUNT-IN > 0 THEN
        ADD AMT-IN TO DB-AMT-ACCUM
    ELSE ADD AMT-IN TO CR-AMT-ACCUM.
    MOVE AMT-IN TO AMOUNT-OUT, DISK-AMOUNT.
    IF ITEM-NO-IN NOT = SPACES
        PERFORM FILL-IN-INVENTORY-DATA
    ELSE MOVE ZEROS TO DISK-QUANITY.
FILL-DISK-REC.
    MOVE ENTRY-NO TO DISK-SOURCE-DOC-NO.
    MOVE M-T-DATE TO DISK-SOURCE-DOC-DATE.
    MOVE SOURCE-CODE TO DISK-SOURCE-CODE.
    MOVE DESC-IN TO DISK-DESC-FIELD.
    EXAMINE QUANTITY-IN-ALPHA REPLACING ALL ' ' BY '0'.
    MOVE QUANTITY-IN TO DISK-QUANITY.
    MOVE ITEM-NO-IN TO DISK-ITEM-NO.
WRITE-DISK.
    IF ERROR-CODE = SPACES
        PERFORM WRITE-DISK-OUT.
        MOVE SPACES TO DISK-OUT.
WRITE-LINE-OUT.
    IF ERROR-CODE NOT = SPACES THEN
        PERFORM MOVE-IN-ERRORS VARYING I
```

```
            FROM 1 BY 1 UNTIL ERROR-CODE = SPACES
    ELSE MOVE DATA-LINE TO PRINT-LINE
        PERFORM PRINT-LINE-OUT.
CHECK-ENTRY-NO.
    PERFORM READ-RECORDS.
    IF ENTRY-NO NOT = ENTRY-NO-HOLD THEN
        PERFORM WRITE-SUBS.
    IF LINE-CT > MAX-LINE THEN
        PERFORM WRITE-HEADINGS.
    GO TO EDIT-RECORDS.
FIND-COST-CNTR.
    IF CC-FIRST-2-DIGITS NOT = ZEROS THEN
        MOVE COST-CTR-IN TO CC-NOMINAL
        READ COST-CNTR-TABFI INVALID KEY
        MOVE '1' TO ERR-CODE (3)
    ELSE PERFORM SEARCH-CC.
    MOVE COST-CTR-IN TO DISK-COST-CNTR.
MOVE-IN-ERRORS.
    IF ERR-CODE (I) NOT = SPACES
        MOVE ERR-LIST (I) TO COMMENT
        MOVE DATA-LINE TO PRINT-LINE
        PERFORM PRINT-LINE-OUT
    MOVE SPACES TO DATA-LINE, ERR-CODE (I).
PAGE-OVFLOW.
    IF LINE-CT NOT < MAX-LINE THEN
    PERFORM WRITE-SUBS
    PERFORM WRITE-HEADINGS.
PAGE-OVFLOW-END.
    EXIT.
FILL-IN-INVENTORY-DATA.
    EXAMINE QUANTITY-IN-ALPHA REPLACING ALL ' ' BY '0'.
    MOVE QUANTITY-IN TO DISK-QUANITY.
    MOVE ITEM-NO-IN TO DISK-ITEM-NO.
SEARCH-CC.
    MOVE CC-SECOND-2-DIGITS TO SEARCH-NO.
    SET CC TO 1.
    SEARCH ALL COST-CNTRS AT END
        MOVE '1' TO ERR-CODE (3)
    WHEN CC-SIZE-2 (CC) = TO SEARCH-NO
        MOVE CC-SIZE-4 (CC) TO COST-CTR-IN.
WRITE-SUBS.
    MOVE SPACES TO DATA-LINE.
    MOVE CR-AMT-ACCUM TO CR-TOTAL-OUT.
    MOVE DB-AMT-ACCUM TO DB-TOTAL-OUT.
    ADD CR-AMT-ACCUM DB-AMT-ACCUM GIVING BALANCE-AMOUNTS.
    IF BALANCE-AMOUNTS NOT = 0 THEN
        MOVE ' CREDITS & DEBITS NOT =  ' TO COMMENT
    ELSE MOVE SPACES TO COMMENT.
    PERFORM WRITE-LINE-OUT.
    ADD CR-AMT-ACCUM TO CR-TOTAL.
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```
         ADD DB-AMT-ACCUM TO DB-TOTAL.
         MOVE ZEROS TO CR-AMT-ACCUM,
                       DB-AMT-ACCUM.
         MOVE SPACES TO DATA-LINE.
     MOVE-SPACES.
         MOVE SPACES TO PRINT-LINE.
     PRINT-LINE-OUT.
         WRITE PRINT-LINE BEFORE ADVANCING 1.
         ADD 1 TO LINE-CT.
    *
    *    SORT  ROUTINE
    *
     READ-SORT-INPUT.
         READ CARD-IN AT END GO TO READ-SORT-INPUT-END.
         IF 1D1 NOT = TO SOURCE-CODE THEN
             WRITE PRINT-LINE FROM INPUT-CARD AFTER ADVANCING 1
         PERFORM MOVE-SPACES
             GO TO READ-SORT-INPUT.
         RELEASE SORT-INPUT FROM INPUT-CARD.
         GO TO READ-SORT-INPUT.
     READ-SORT-INPUT-END.
         EXIT.
     WRITE-SORT-OUTPUT.
         RETURN FILE-SORT RECORD INTO INPUT-RECS
             AT END GO TO WRITE-SORT-OUTPUT-END.
         WRITE INPUT-RECS.
         GO TO WRITE-SORT-OUTPUT.
     WRITE-SORT-OUTPUT-END.
         EXIT.
    *
    *    END SORT ROUTINE
    *
     WRITE-DISK-OUT.
         MOVE SPACES TO SAVE-DISK.
         IF  DISK-ACCT = '461-00  I ' OR '470-00  I ' OR '474-10  I '
             MOVE DISK-OUT TO SAVE-DISK.
         PERFORM WRITE-DISK-REC.
         IF SAVE-ACCT = '461-00  I '
             MOVE '461-10    ' TO SAVE-ACCT
             MOVE SAVE-DISK TO DISK-OUT
             PERFORM WRITE-DISK-REC.
         IF SAVE-ACCT = '470-00  I '
             MOVE '470-10    ' TO SAVE-ACCT
             MOVE SAVE-DISK TO DISK-OUT
             PERFORM WRITE-DISK-REC.
         IF SAVE-ACCT = '474-10  I '
             MOVE '474-15    ' TO SAVE-ACCT
             MOVE SAVE-DISK TO DISK-OUT
             PERFORM WRITE-DISK-REC.
     WRITE-DISK-REC.
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          WRITE DISK-OUT.
      WRITE-FINAL-TOTALS.
          PERFORM WRITE-SUBS.
          PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
          PERFORM PRINT-LINE-OUT 2 TIMES.
          MOVE SPACES TO DATA-LINE.
          MOVE CR-TOTAL TO CR-TOTAL-OUT.
          MOVE DB-TOTAL TO DB-TOTAL-OUT.
          MOVE DATA-LINE TO PRINT-LINE.
          PERFORM PRINT-LINE-OUT.
      CLOSE-FILES.
          CLOSE SORTED-FILE, FINANCIAL-ACCT-TABFI,
              SPECIAL-ACCT-TABFI, FINANCIAL-COST-ALLOCATION,
              COST-CNTR-TABFI, PRINT-OUT.
      E-O-J.
          STOP RUN.
/*
//
/*EOF
```

```
//          PGMNAME=WUASPAER
//COB.SYSIN  DD *
       IDENTIFICATION DIVISION.
       PROGRAM-ID. WUASPAER.
       AUTHOR. ACT SYSTEMS, INC
               SUITE 200
               807 W MORSE BLVD
               WINTER PARK, FLA 32789 .
       DATE-WRITTEN. OCT 5 1977.
       DATE-COMPILED.  OCT 6 1977.
       REMARKS. THIS PROGRAM EDITS THE PAYMENT AUTHORIZATION DATA
               CARDS, TOTALS ALL COSTS, FLAGS ANY DISCREPANCIES.
       ENVIRONMENT DIVISION.
       CONFIGURATION SECTION.
       SOURCE-COMPUTER. IBM-370.
       OBJECT-COMPUTER. IBM-370.
       SPECIAL-NAMES.
           C01 IS NEW-PAGE.
       INPUT-OUTPUT  SECTION.
       FILE-CONTROL.
           SELECT CARD-IN
             ASSIGN TO UR-2540R-S-CARDIN
             ACCESS MODE IS SEQUENTIAL.
           SELECT FILE-SORT
             ASSIGN TO UT-3330-S-FILESORT
             ACCESS MODE IS SEQUENTIAL.
           SELECT SORTED-FILE
             ASSIGN TO UT-3330-S-SORTEDFI
             ACCESS MODE IS SEQUENTIAL.
           SELECT PRINT-OUT
             ASSIGN TO UR-1403-S-PRINTOUT
             ACCESS MODE IS SEQUENTIAL.
           SELECT FINANCIAL-ACCT-TABFI
               ASSIGN TO DA-3330-I-FATABFI
               ACCESS MODE IS RANDOM
               NOMINAL KEY IS FA-NOMINAL
               RECORD KEY IS FA-NUMBER.
           SELECT COST-CNTR-TABFI
               ASSIGN TO DA-3330-I-CCTABFI
               ACCESS MODE IS RANDOM
               NOMINAL KEY IS CC-NOMINAL
               RECORD KEY IS CC-NUMBER.
           SELECT SPECIAL-ACCT-TABFI
               ASSIGN TO DA-3330-S-SATABFI
               ACCESS MODE IS SEQUENTIAL.
           SELECT FINANCIAL-COST-ALLOCATION
               ASSIGN TO UT-3330-S-FICALFI
               ACCESS MODE IS SEQUENTIAL.
       DATA DIVISION.
       FILE SECTION.
```

```
 FD   CARD-IN
      RECORD CONTAINS 80 CHARACTERS
      LABEL RECORDS ARE OMITTED
      DATA RECORD IS INPUT-CARD.
 01   INPUT-CARD.
      02   ID1 PIC X.
      02   ID2 PIC X(79).
 01   DATE-CARD.
      02   DATE-IN        PIC X(18).
      02   TITLE-IN       PIC X(24).
      02   FILLER         PIC X(38).
 SD   FILE-SORT
      RECORD CONTAINS 80 CHARACTERS
      DATA RECORD IS SORT-INPUT.
 01   SORT-INPUT.
      02   S-SOURCE-CODE-NO PIC X.
      02   FILLER           PIC X.
      02   S-PAY-AUTH       PIC X(8).
      02   FILLER           PIC X(70).
 FD   SORTED-FILE
      RECORD CONTAINS 80 CHARACTERS
      LABEL RECORDS ARE STANDARD
      DATA RECORD IS INPUT-RECS.
 01   INPUT-RECS.
      02   SOURCE-CODE-NO   PIC X.
      02   FILLER           PIC X.
      02   PAY-AUTH-IN      PIC X(8).
      02   FILLER           PIC X.
      02   P-A-DATE         PIC X(6).
      02   FILLER           PIC X.
      02   ACCT-IN.
           05   FILLER      PIC X(8).
           05   FRS-UTIL-CODE PIC X.
           05   FILLER      PIC X.
      02   FILLER           PIC X.
      02   COST-CTR-IN.
           05   CC-FIRST-2-DIGITS  PIC XX.
           05   CC-SECOND-2-DIGITS PIC XX.
      02   FILLER           PIC X.
      02   QUANTITY-IN-ALPHA PIC X(6).
      02   QUANTITY-IN REDEFINES QUANTITY-IN-ALPHA PIC S9(5)V9.
      02   FILLER           PIC X.
      02   STOCK-NO-IN      PIC X(8).
      02   FILLER           PIC X.
      02   AMOUNT-IN        PIC X(10).
      02   AMT-IN REDEFINES AMOUNT-IN PIC S9(8)V99.
      02   FILLER           PIC X.
      02   DESC-IN          PIC X(19).
 FD   PRINT-OUT
      RECORD CONTAINS 133 CHARACTERS
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           LABEL RECORDS ARE OMITTED
           DATA RECORD IS PRINT-LINE.
       01  PRINT-LINE          PIC X(133).
       FD  COST-CNTR-TABFI
           BLOCK CONTAINS 8 RECORDS
           RECORD CONTAINS 30 CHARACTERS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS CC-REC.
       01  CC-REC.
           02  CC-NUMBER           PIC 9(4).
           02  CC-NAME             PIC X(13) OCCURS 2 TIMES.
       FD  FINANCIAL-ACCT-TABFI
           BLOCK CONTAINS 8 RECORDS
           RECORD CONTAINS 58 CHARACTERS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS FA-REC.
       01  FA-REC.
           05  FA-NUMBER           PIC X(10).
           05  FA-NAME             PIC X(20) OCCURS 2 TIMES.
           05  FA-FUND-NO          PIC XX.
           05  FA-ACCT-TYPE        PIC XX.
           05  FILLER              PIC X(4).
       FD  SPECIAL-ACCT-TABFI
           BLOCK CONTAINS 0 RECORDS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS COST-CENTERS.
       01  COST-CENTERS.
           05  RECORD-COUNT.
               10  NO-OF-RECS      PIC 9(4).
               10  FILLER          PIC X(18).
           05  COST-CNTRS OCCURS 1 TO 99 TIMES
               DEPENDING ON NO-OF-RECS
               ASCENDING KEY IS CC-SIZE-2
               INDEXED BY CC.
               10  CC-SIZE-2       PIC X(2).
               10  CC-SIZE-4       PIC X(4).
               10  FILLER          PIC X(16).
       FD  FINANCIAL-COST-ALLOCATION
           BLOCK CONTAINS 5 RECORDS
           RECORD CONTAINS 100 CHARACTERS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS DISK-OUT.
       01  DISK-OUT.
           05  DISK-ACCT           PIC X(10).
           05  DISK-COST-CNTR      PIC X(4).
           05  DISK-FUND-NO        PIC XX.
           05  DISK-ACCT-TYPE      PIC XX.
           05  FILLER              PIC XX.
           05  DISK-AMOUNT         PIC S9(8)V99.
           05  DISK-ITEM-NO        PIC X(8).
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        05  DISK-QUANITY     PIC S9(5)V9.
        05  DISK-SOURCE-DOC-DATE PIC X(6).
        05  DISK-SOURCE-CODE PIC X.
        05  DISK-SOURCE-DOC-NO PIC X(11).
        05  DISK-DESC-FIELD  PIC X(30).
        05  FILLER           PIC X(8).
    01  DATE-TITLE-REC.
        05  FILLER           PIC X.
        05  SORT-SEQUENCE    PIC X.
        05  DISK-DATE        PIC X(18).
        05  FILLER           PIC X(6).
        05  DISK-TITLE-1     PIC X(24).
        05  DISK-TITLE-2     PIC X(24).
        05  FILLER           PIC X(26).
    WORKING-STORAGE SECTION.
    77  SOURCE-CODE          PIC X VALUE '4'.
    77  SEARCH-NO            PIC XX VALUE SPACES.
    77  LINE-CT              PIC 99 VALUE 0.
    77  PAGE-CT              PIC 9(4) VALUE 1.
    77  AMT-ACCUM            PIC S9(8)V99 VALUE 0.
    77  TOTAL-HOLD           PIC S9(8)V99 VALUE 0.
    77  PAY-AUTH-HOLD        PIC X(10) VALUE SPACES.
    77  NUMERIC-HOLD         PIC X(10) VALUE SPACES.
    77  I                    PIC 9 VALUE 0.
    77  MAX-LINE             PIC 99 VALUE 50.
    77  FA-NOMINAL           PIC X(10).
    77  CC-NOMINAL           PIC X(4).
    77  PRINT-PAY-AUTH-FLAG  PIC X VALUE '1'.
        88  FLAG-ON          VALUE '1'.
        88  FLAG-OFF         VALUE '0'.
    01  HEADING-1.
        02  FILLER           PIC X(51) VALUE SPACES.
        02  FILLER           PIC X(28) VALUE  'JOURNAL AUTHORIZATION
                                                 'REPORT'.
        02  FILLER           PIC X(53) VALUE SPACES.
    01  HEADING-2.
        02  FILLER           PIC X VALUE SPACES.
        02  FILLER PIC X(13) VALUE 'DATE ENDING: '.
        02  DATE-OUT         PIC X(18) VALUE SPACES.
        02  FILLER           PIC X(33) VALUE SPACES.
        02  FILLER           PIC X(3) VALUE 'FOR'.
        02  FILLER           PIC X(53) VALUE SPACES.
        02  FILLER           PIC X(5)  VALUE  'PAGE '.
        02  PAGE-OUT         PIC ZZZ9.
        02  FILLER           PIC X(3) VALUE SPACES.
        02  FILLER           PIC X(4)  VALUE SPACES.
    01  HEADING-3.
        02  FILLER           PIC X(54) VALUE SPACES.
        02  TITLE-OUT        PIC X(24) VALUE SPACES.
        02  FILLER           PIC X(55) VALUE SPACES.
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 01  HEADING-4.
     02  FILLER               PIC X(17) VALUE SPACES.
     02  FILLER               PIC X(15) VALUE 'JOURNAL AUTH. #'.
     02  FILLER               PIC X(8) VALUE SPACES.
     02  FILLER               PIC X(9) VALUE 'ACCOUNT #'.
     02  FILLER               PIC X(5) VALUE SPACES.
     02  FILLER               PIC X(11) VALUE 'COST CENTER'.
     02  FILLER               PIC X(9) VALUE SPACES.
     02  FILLER               PIC X(6) VALUE 'AMOUNT'.
     02  FILLER               PIC X(11) VALUE SPACES.
     02  FILLER               PIC X(5) VALUE 'TOTAL'.
     02  FILLER               PIC X(11) VALUE SPACES.
     02  FILLER               PIC X(8) VALUE 'COMMENTS'.
     02  FILLER               PIC X(18) VALUE SPACES.
 01  DATA-LINE.
     02  FILLER               PIC X(20) VALUE SPACES.
     02  PAY-AUTH-OUT         PIC X(10).
     02  FILLER               PIC X(10) VALUE SPACES.
     02  ACCT-OUT             PIC X(10).
     02  FILLER               PIC X(8)  VALUE SPACES.
     02  COST-CTR-OUT         PIC X(4).
     02  FILLER               PIC X(8)  VALUE SPACES.
     02  AMOUNT-OUT           PIC -(8).--.
     02  FILLER               PIC X(5) VALUE SPACES.
     02  TOTAL-OUT            PIC -(8).--.
     02  FILLER               PIC X(5) VALUE SPACES.
     02  COMMENT              PIC X(25) VALUE SPACES.
     02  FILLER               PIC X(6)  VALUE SPACES.
 01  ERROR-CODE.
     02  ERR-CODE OCCURS 7 TIMES PIC 9.
 01  ERROR-LIST.
     02  ERR-LIST-A.
         05  ERR-LIST1 PIC X(75) VALUE  'ACCOUNT NUMBER NOT FOUND
-                                        'PAY AUTHORTY NOT NUMERIC
                                      'COST CENTER NOT NUMERIC  '.
         05  ERR-LIST2 PIC X(100) VALUE 'COST CENTER NOT FOUND
-                                        'AMOUNT NOT NUMERIC
-                                        'TOTAL NOT NUMERIC
                                      'AMOUNTS & TOTAL NOT EQUAL'.
     02  ERR-LIST-B REDEFINES ERR-LIST-A.
         05  ERR-LIST OCCURS 7 TIMES PIC X(25).
 01  SAVE-DISK.
     05  SAVE-ACCT            PIC X(10).
     05  FILLER               PIC X(90).
PROCEDURE DIVISION.
OPEN-FILES.
     OPEN INPUT CARD-IN.
     OPEN OUTPUT PRINT-OUT, SORTED-FILE,
                 FINANCIAL-COST-ALLOCATION.
READ-TITLE-CARD.
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    READ CARD-IN AT END GO TO WRITE-FINAL-TOTALS.
    MOVE SPACES TO DISK-OUT.
    MOVE DATE-IN TO DATE-OUT, DISK-DATE.
    MOVE TITLE-IN TO TITLE-OUT, DISK-TITLE-1.
    MOVE SOURCE-CODE TO SORT-SEQUENCE.
    PERFORM WRITE-DISK-REC.
    MOVE SPACES TO PRINT-LINE, DISK-OUT.
    MOVE ' THE FOLLOWING CARDS HAVE A INVALID SOURCE CODE'
        TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
SORT-RECORDS.
    SORT FILE-SORT ON ASCENDING KEY
        S-PAY-AUTH
    INPUT PROCEDURE READ-SORT-INPUT
        THRU READ-SORT-INPUT-END
    OUTPUT PROCEDURE WRITE-SORT-OUTPUT
        THRU WRITE-SORT-OUTPUT-END.
CLOSE-SORT-FILES.
    CLOSE SORTED-FILE, CARD-IN.
    OPEN INPUT SORTED-FILE, FINANCIAL-ACCT-TABFI,
               COST-CNTR-TABFI, SPECIAL-ACCT-TABFI.
HOUSEKEEPING.
    MOVE ZEROS TO ERROR-CODE.
    READ SPECIAL-ACCT-TABFI AT END
        MOVE 'COST CENTER TABLE CONTAINS NO DATA' TO
        PRINT-LINE,
        PERFORM PRINT-LINE-OUT
        GO TO CLOSE-FILES.
WRITE-HEADINGS.
    MOVE 0 TO LINE-CT.
    MOVE PAGE-CT TO PAGE-OUT.
    PERFORM MOVE-SPACES.
    WRITE PRINT-LINE BEFORE ADVANCING NEW-PAGE.
    MOVE HEADING-1 TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    MOVE HEADING-2 TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    MOVE HEADING-3 TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
    MOVE HEADING-4 TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
    ADD 1 TO PAGE-CT.
READ-RECORDS.
    READ SORTED-FILE AT END GO TO WRITE-FINAL-TOTALS.
EDIT-RECORDS.
    MOVE ACCT-IN TO ACCT-OUT, FA-NOMINAL, DISK-ACCT.
    READ FINANCIAL-ACCT-TABFI INVALID KEY
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        MOVE 1 TO ERR-CODE (1).
    IF ERR-CODE (1) NOT = 1
        MOVE FA-FUND-NO TO DISK-FUND-NO
        MOVE FA-ACCT-TYPE TO DISK-ACCT-TYPE.
    MOVE PAY-AUTH-IN TO PAY-AUTH-HOLD.
    IF FLAG-ON MOVE PAY-AUTH-IN TO PAY-AUTH-OUT
        ELSE MOVE SPACES TO PAY-AUTH-OUT.
    MOVE COST-CTR-IN TO COST-CTR-OUT.
    EXAMINE QUANTITY-IN-ALPHA REPLACING ALL ' ' BY '0'.
    EXAMINE COST-CTR-IN       REPLACING ALL ' ' BY '0'.
    EXAMINE AMOUNT-IN         REPLACING ALL ' ' BY '0'.
    IF COST-CTR-IN NOT NUMERIC MOVE 1 TO ERR-CODE (3)
        MOVE ZEROS TO COST-CTR-IN.
    IF COST-CTR-IN NOT = ZEROS THEN
        PERFORM FIND-COST-CNTR.
    MOVE AMT-IN TO AMOUNT-OUT, DISK-AMOUNT.
    ADD AMT-IN TO AMT-ACCUM, TOTAL-HOLD.
    MOVE 0 TO TOTAL-OUT.
FILL-DISK-REC.
    MOVE PAY-AUTH-IN TO DISK-SOURCE-DOC-NO.
    MOVE P-A-DATE TO DISK-SOURCE-DOC-DATE.
    MOVE SOURCE-CODE TO DISK-SOURCE-CODE.
    MOVE DESC-IN TO DISK-DESC-FIELD.
    MOVE QUANTITY-IN TO DISK-QUANITY.
    MOVE STOCK-NO-IN TO DISK-ITEM-NO.
READ-NEXT-REC.
    PERFORM READ-RECORDS.
CHECK-NEXT-REC.
    MOVE PAY-AUTH-IN TO NUMERIC-HOLD.
    IF NUMERIC-HOLD = TO PAY-AUTH-HOLD THEN
                         MOVE '0' TO PRINT-PAY-AUTH-FLAG
                         GO TO WRITE-LINE-OUT.
    MOVE '1' TO PRINT-PAY-AUTH-FLAG.
    MOVE AMT-ACCUM TO TOTAL-OUT.
    IF AMT-ACCUM NOT = 0
        MOVE 1 TO ERR-CODE (7).
    MOVE ZEROS TO AMT-ACCUM.
WRITE-LINE-OUT.
    IF ERROR-CODE NOT = TO ZEROS THEN
        PERFORM MOVE-IN-ERRORS VARYING I
            FROM 1 BY 1 UNTIL ERROR-CODE = ZEROS
    ELSE MOVE DATA-LINE TO PRINT-LINE
        PERFORM PRINT-LINE-OUT
        PERFORM WRITE-DISK-OUT
        MOVE SPACES TO DISK-OUT.
    IF FLAG-ON THEN
        PERFORM PAGE-OVFLOW THRU PAGE-OVFLOW-END.
    GO TO EDIT-RECORDS.
FIND-COST-CNTR.
    IF CC-FIRST-2-DIGITS NOT = ZEROS THEN
```

```
         MOVE COST-CTR-IN TO CC-NOMINAL
         READ COST-CNTR-TABFI INVALID KEY
             MOVE 1 TO ERR-CODE (4)
         ELSE PERFORM SEARCH-CC.
         MOVE COST-CTR-IN TO DISK-COST-CNTR.
 MOVE-IN-ERRORS.
     IF ERR-CODE (I) NOT = ZERO THEN
         MOVE ERR-LIST (I) TO COMMENT
         MOVE DATA-LINE TO PRINT-LINE
         PERFORM PRINT-LINE-OUT
         MOVE SPACES TO DATA-LINE
         MOVE ZERO TO ERR-CODE (I).
     IF ERR-CODE (I) = 7
         PERFORM WRITE-DISK-OUT
         MOVE SPACES TO DISK-OUT.
 PAGE-OVFLOW.
     IF LINE-CT NOT < MAX-LINE
         PERFORM WRITE-HEADINGS.
 PAGE-OVFLOW-END.
     EXIT.
 SEARCH-CC.
     MOVE CC-SECOND-2-DIGITS TO SEARCH-NO.
     SET CC TO 1.
     SEARCH ALL COST-CNTRS AT END
         MOVE 1 TO ERR-CODE (4)
     WHEN CC-SIZE-2 (CC) = TO SEARCH-NO
         MOVE CC-SIZE-4 (CC) TO COST-CTR-IN.
 MOVE-SPACES.
     MOVE SPACES TO PRINT-LINE.
 PRINT-LINE-OUT.
     WRITE PRINT-LINE BEFORE ADVANCING 1.
     ADD 1 TO LINE-CT.
*
 READ-SORT-INPUT.
     READ CARD-IN AT END GO TO READ-SORT-INPUT-END.
     IF ID1 NOT = TO SOURCE-CODE THEN
         WRITE PRINT-LINE FROM INPUT-CARD AFTER ADVANCING 1
     PERFORM MOVE-SPACES
     GO TO READ-SORT-INPUT.
     RELEASE SORT-INPUT FROM INPUT-CARD.
     GO TO READ-SORT-INPUT.
 READ-SORT-INPUT-END.
     EXIT.
 WRITE-SORT-OUTPUT.
     RETURN FILE-SORT RECORD INTO INPUT-RECS
         AT END GO TO WRITE-SORT-OUTPUT-END.
     WRITE INPUT-RECS.
     GO TO WRITE-SORT-OUTPUT.
 WRITE-SORT-OUTPUT-END.
     EXIT.
```

```
      *
      *    END SORT ROUTINE
      *
       WRITE-DISK-OUT.
           MOVE SPACES TO SAVE-DISK.
           IF DISK-ACCT = '461-00  I ' OR '470-00  I ' OR
                          '474-10  I '
              MOVE DISK-OUT TO SAVE-DISK.
           PERFORM WRITE-DISK-REC.
           IF SAVE-ACCT = '461-00  I '
              MOVE '461-10    ' TO SAVE-ACCT
              MOVE SAVE-DISK TO DISK-OUT
              PERFORM WRITE-DISK-REC.
           IF SAVE-ACCT = '470-00  I '
              MOVE '470-10    ' TO SAVE-ACCT
              MOVE SAVE-DISK TO DISK-OUT
              PERFORM WRITE-DISK-REC.
           IF SAVE-ACCT = '474-10  I '
              MOVE '474-15    ' TO SAVE-ACCT
              MOVE SAVE-DISK TO DISK-OUT
              PERFORM WRITE-DISK-REC.
       WRITE-DISK-REC.
           WRITE DISK-OUT.
       WRITE-FINAL-TOTALS.
           IF ERROR-CODE = TO ZERO THEN
              PERFORM WRITE-DISK-REC.
           MOVE TOTAL-HOLD TO TOTAL-OUT.
           MOVE DATA-LINE TO PRINT-LINE.
           PERFORM PRINT-LINE-OUT.
           PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
       CLOSE-FILES.
           CLOSE SORTED-FILE, FINANCIAL-ACCT-TABFI,
              SPECIAL-ACCT-TABFI, FINANCIAL-COST-ALLOCATION,
              COST-CNTR-TABFI, PRINT-OUT.
       E-O-J.
           STOP RUN.
/*
//
/*EOF
```

```
//          PGMNAME=WUASRSER
//COB.SYSIN  DD *
       IDENTIFICATION DIVISION.
       PROGRAM-ID. WUASRSER.
       AUTHOR. ACT SYSTEMS, INC
                SUITE 200
                807 W MORSE BLVD
                WINTER PARK, FLA 32789 .
       DATE-WRITTEN. OCT 3 1977.
       DATE-COMPILED.  OCT 5 1977.
       REMARKS. THIS PROGRAM EDITS THE REQUISITION FOR STOCK DATA
                CARDS, TOTALS ALL COSTS, FLAGS ANY DISCREPANCIES.
       ENVIRONMENT DIVISION.
       CONFIGURATION SECTION.
       SOURCE-COMPUTER. IBM-370.
       OBJECT-COMPUTER. IBM-370.
       SPECIAL-NAMES.
           C01 IS NEW-PAGE.
       INPUT-OUTPUT  SECTION.
       FILE-CONTROL.
           SELECT CARD-IN
             ASSIGN TO UR-2540R-S-CARDIN
             ACCESS MODE IS SEQUENTIAL.
           SELECT FILE-SORT
             ASSIGN TO UT-3330-S-FILESORT
             ACCESS MODE IS SEQUENTIAL.
           SELECT SORTED-FILE
             ASSIGN TO UT-3330-S-SORTEDFI
             ACCESS MODE IS SEQUENTIAL.
           SELECT PRINT-OUT
             ASSIGN TO UR-1403-S-PRINTOUT
             ACCESS MODE IS SEQUENTIAL.
           SELECT FINANCIAL-ACCT-TABFI
               ASSIGN TO DA-3330-I-FATABFI
               ACCESS MODE IS RANDOM
               NOMINAL KEY IS FA-NOMINAL
               RECORD KEY IS FA-NUMBER.
           SELECT COST-CNTR-TABFI
               ASSIGN TO DA-3330-I-CCTABFI
               ACCESS MODE IS RANDOM
               NOMINAL KEY IS CC-NOMINAL
               RECORD KEY IS CC-NUMBER.
           SELECT SPECIAL-ACCT-TABFI
               ASSIGN TO DA-3330-S-SATABFI
               ACCESS MODE IS SEQUENTIAL.
           SELECT FINANCIAL-COST-ALLOCATION
               ASSIGN TO UT-3330-S-FICALFI
               ACCESS MODE IS SEQUENTIAL.
       DATA DIVISION.
       FILE SECTION.
```

```
FD  CARD-IN
    RECORD CONTAINS 80 CHARACTERS
    LABEL RECORDS ARE OMITTED
    DATA RECORD IS INPUT-CARD.
01  INPUT-CARD.
    02  ID1 PIC X.
    02  ID2 PIC X(79).
01  DATE-CARD.
    02  DATE-IN        PIC X(18).
    02  TITLE-IN       PIC X(24).
    02  FILLER         PIC X(38).
SD  FILE-SORT
    RECORD CONTAINS 80 CHARACTERS
    DATA RECORD IS SORT-INPUT.
01  SORT-INPUT.
    02  S-SOURCE-CODE-NO PIC X.
    02  FILLER           PIC X.
    02  S-REQ-NO         PIC X(8).
    02  FILLER           PIC X(70).
FD  SORTED-FILE
    RECORD CONTAINS 80 CHARACTERS
    LABEL RECORDS ARE STANDARD
    DATA RECORD IS INPUT-RECS.
01  INPUT-RECS.
    02  SOURCE-CODE-NO   PIC X.
    02  FILLER           PIC X.
    02  REQ-IN           PIC X(8).
    02  FILLER           PIC X.
    02  R-S-DATE         PIC X(6).
    02  FILLER           PIC X.
    02  ACCT-IN          PIC X(10).
    02  FILLER           PIC X.
    02  COST-CTR-IN.
        05  CC-FIRST-2-DIGITS  PIC XX.
        05  CC-SECOND-2-DIGITS PIC XX.
    02  FILLER           PIC X.
    02  QUANTITY-IN-ALPHA PIC X(6).
    02  QUANTITY-IN REDEFINES QUANTITY-IN-ALPHA PIC S9(5)V9.
    02  FILLER           PIC X.
    02  STOCK-NO-IN      PIC X(8).
    02  FILLER           PIC X.
    02  AMOUNT-IN        PIC X(10).
    02  AMT-IN REDEFINES AMOUNT-IN PIC S9(8)V99.
    02  FILLER           PIC X.
    02  TOTAL-IN         PIC X(10).
    02  TOT-IN REDEFINES TOTAL-IN PIC S9(8)V99.
    02  FILLER           PIC X.
    02  DESC-IN          PIC X(8).
FD  PRINT-OUT
    RECORD CONTAINS 133 CHARACTERS
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```
           LABEL RECORDS ARE OMITTED
           DATA RECORD IS PRINT-LINE.
       01  PRINT-LINE            PIC X(133).
       FD  COST-CNTR-TABFI
           BLOCK CONTAINS 8 RECORDS
           RECORD CONTAINS 30 CHARACTERS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS CC-REC.
       01  CC-REC.
           02  CC-NUMBER             PIC 9(4).
           02  CC-NAME               PIC X(13) OCCURS 2 TIMES.
       FD  FINANCIAL-ACCT-TABFI
           BLOCK CONTAINS 8 RECORDS
           RECORD CONTAINS 58 CHARACTERS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS FA-REC.
       01  FA-REC.
           05  FA-NUMBER             PIC X(10).
           05  FA-NAME               PIC X(20) OCCURS 2 TIMES.
           05  FA-FUND-NO            PIC XX.
           05  FA-ACCT-TYPE          PIC XX.
           05  FILLER                PIC X(4).
       FD  SPECIAL-ACCT-TABFI
           BLOCK CONTAINS 0 RECORDS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS COST-CENTERS.
       01  COST-CENTERS.
           05  RECORD-COUNT.
               10  NO-OF-RECS    PIC 9(4).
               10  FILLER        PIC X(18).
           05  COST-CNTRS OCCURS 1 TO 99 TIMES
               DEPENDING ON NO-OF-RECS
               ASCENDING KEY IS CC-SIZE-2
               INDEXED BY CC.
               10  CC-SIZE-2     PIC X(2).
               10  CC-SIZE-4     PIC X(4).
               10  FILLER        PIC X(16).
       FD  FINANCIAL-COST-ALLOCATION
           BLOCK CONTAINS 5 RECORDS
           RECORD CONTAINS 100 CHARACTERS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS DISK-OUT.
       01  DISK-OUT.
           05  DISK-ACCT             PIC X(10).
           05  DISK-COST-CNTR        PIC X(4).
           05  DISK-FUND-NO          PIC XX.
           05  DISK-ACCT-TYPE        PIC XX.
           05  FILLER                PIC XX.
           05  DISK-AMOUNT           PIC S9(8)V99.
           05  DISK-ITEM-NO          PIC X(8).
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          05  DISK-QUANTITY      PIC S9(5)V9.
          05  DISK-SOURCE-DOC-DATE  PIC X(6).
          05  DISK-SOURCE-CODE PIC X.
          05  DISK-SOURCE-DOC-NO  PIC X(11).
          05  DISK-DESC-FIELD  PIC X(30).
          05  FILLER           PIC X(8).
      01  DATE-TITLE-REC.
          05  FILLER           PIC X.
          05  SORT-SEQUENCE    PIC X.
          05  DISK-DATE        PIC X(18).
          05  FILLER           PIC X(6).
          05  DISK-TITLE-1     PIC X(24).
          05  DISK-TITLE-2     PIC X(24).
          05  FILLER           PIC X(26).
      WORKING-STORAGE SECTION.
      77  SOURCE-CODE          PIC X VALUE '2'.
      77  SEARCH-NO            PIC XX VALUE SPACES.
      77  LINE-CT              PIC 99 VALUE 0.
      77  PAGE-CT              PIC 9(4) VALUE 1.
      77  AMT-ACCUM            PIC S9(8)V99 VALUE 0.
      77  AMT-SUB-TOTAL        PIC S9(8)V99 VALUE 0.
      77  REQ-HOLD             PIC X(10) VALUE SPACES.
      77  NUMERIC-HOLD         PIC X(10) VALUE SPACES.
      77  TOTAL-HOLD           PIC S9(8)V99 VALUE 0.
      77  I                    PIC 9 VALUE 0.
      77  MAX-LINE             PIC 99 VALUE 56.
      77  FA-NOMINAL           PIC X(10).
      77  CC-NOMINAL           PIC X(4).
      77  PRINT-REQ-FLAG       PIC X VALUE '1'.
          88  FLAG-ON          VALUE '1'.
          88  FLAG-OFF         VALUE '0'.
      01  HEADING-1.
          02  FILLER           PIC X(51) VALUE SPACES.
          02  FILLER           PIC X(29) VALUE 'REQUISITION FROM STOCK
     -                                    ' REPORT'.
          02  FILLER           PIC X(53) VALUE SPACES.
      01  HEADING-2.
          02  FILLER           PIC X VALUE SPACES.
          02  FILLER           PIC X(13) VALUE 'DATE ENDING: '.
          02  DATE-OUT         PIC X(18) VALUE SPACES.
          02  FILLER           PIC X(33) VALUE SPACES.
          02  FILLER           PIC X(3) VALUE 'FOR'.
          02  FILLER           PIC X(53) VALUE SPACES.
          02  FILLER           PIC X(5)  VALUE  'PAGE '.
          02  PAGE-OUT         PIC ZZZ9.
          02  FILLER           PIC X(3) VALUE SPACES.
      01  HEADING-3.
          02  FILLER           PIC X(54) VALUE SPACES.
          02  TITLE-OUT        PIC X(24) VALUE SPACES.
          02  FILLER           PIC X(55) VALUE SPACES.
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       01  HEADING-4.
           02  FILLER          PIC X VALUE SPACES.
           02  FILLER          PIC X(13) VALUE 'REQUISITION #'.
           02  FILLER          PIC X(7) VALUE SPACES.
           02  FILLER          PIC X(9) VALUE 'ACCOUNT #'.
           02  FILLER          PIC X(6) VALUE SPACES.
           02  FILLER          PIC X(11) VALUE 'COST CENTER'.
           02  FILLER          PIC X(5) VALUE SPACES.
           02  FILLER          PIC X(8) VALUE 'QUANTITY'.
           02  FILLER          PIC X(4)  VALUE SPACES.
           02  FILLER          PIC X(8)  VALUE 'STOCK NO'.
           02  FILLER          PIC X(6) VALUE SPACES.
           02  FILLER          PIC X(6) VALUE 'AMOUNT'.
           02  FILLER          PIC X(10) VALUE SPACES.
           02  FILLER          PIC X(5) VALUE 'TOTAL'.
           02  FILLER          PIC X(15) VALUE SPACES.
           02  FILLER          PIC X(8) VALUE 'COMMENTS'.
           02  FILLER          PIC X    VALUE SPACES.
       01  DATA-LINE.
           02  REQ-OUT         PIC X(10).
           02  FILLER          PIC X(10) VALUE SPACES.
           02  ACCT-OUT        PIC X(10).
           02  FILLER          PIC X(8)  VALUE SPACES.
           02  COST-CTR-OUT    PIC X(4).
           02  FILLER          PIC X(8)  VALUE SPACES.
           02  QUANTITY-OUT    PIC -(6).-.
           02  FILLER          PIC X(4).
           02  STOCK-NO-OUT    PIC X(8).
           02  FILLER          PIC X(3).
           02  AMOUNT-OUT      PIC -(8).--.
           02  FILLER          PIC X(4) VALUE SPACES.
           02  TOTAL-OUT       PIC -(8).--.
           02  FILLER          PIC X(9) VALUE SPACES.
           02  COMMENT         PIC X(25) VALUE SPACES.
       01  ERROR-CODE.
           02  ERR-CODE OCCURS 7 TIMES PIC 9.
       01  ERROR-LIST.
           02  ERR-LIST-A.
               05  ERR-LIST1 PIC X(75) VALUE  'ACCOUNT NUMBER NOT FOUND
      -                                   'REQUISITION-NO NONNUMERIC
      -                               'COST CENTER NOT NUMERIC  '.
               05  ERR-LIST2 PIC X(100) VALUE 'COST CENTER NOT FOUND
      -                                       'AMOUNT NOT NUMERIC
      -                                       'TOTAL NOT NUMERIC
      -                               'AMOUNTS & TOTAL NOT EQUAL'.
           02  ERR-LIST-B REDEFINES ERR-LIST-A.
               05  ERR-LIST OCCURS 7 TIMES PIC X(25).
       01  SAVE-DISK-REC.
           05  SAVE-ACCT           PIC X(10).
           05  FILLER              PIC X(4).
```

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    05  SAVE-FUND-ACCT    PIC X(4).
    05  FILLER            PIC XX.
    05  SAVE-AMOUNT       PIC S9(8)V99.
    05  FILLER            PIC X(70).
PROCEDURE DIVISION.
OPEN-FILES.
    OPEN INPUT CARD-IN.
    OPEN OUTPUT PRINT-OUT, SORTED-FILE,
                FINANCIAL-COST-ALLOCATION.
READ-TITLE-CARD.
    READ CARD-IN AT END GO TO WRITE-FINAL-TOTALS.
    MOVE SPACES TO DISK-OUT.
    MOVE DATE-IN TO DATE-OUT, DISK-DATE.
    MOVE TITLE-IN TO TITLE-OUT, DISK-TITLE-1.
    MOVE SOURCE-CODE TO SORT-SEQUENCE.
    WRITE DISK-OUT.
    MOVE SPACES TO PRINT-LINE, DISK-OUT.
    MOVE ' THE FOLLOWING CARDS HAVE A INVALID SOURCE CODE'
        TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
SORT-RECORDS.
    SORT FILE-SORT ON ASCENDING KEY
        S-REQ-NO
    INPUT PROCEDURE READ-SORT-INPUT
        THRU READ-SORT-INPUT-END
    OUTPUT PROCEDURE WRITE-SORT-OUTPUT
        THRU WRITE-SORT-OUTPUT-END.
CLOSE-SORT-FILES.
    CLOSE SORTED-FILE, CARD-IN.
    OPEN INPUT SORTED-FILE, FINANCIAL-ACCT-TABFI,
                COST-CNTR-TABFI, SPECIAL-ACCT-TABFI.
HOUSEKEEPING.
    MOVE ZEROS TO ERROR-CODE.
    READ SPECIAL-ACCT-TABFI AT END
        MOVE 'COST CENTER TABLE CONTAINS NO DATA' TO
        PRINT-LINE,
        PERFORM PRINT-LINE-OUT
        GO TO CLOSE-FILES.
WRITE-HEADINGS.
    MOVE 0 TO LINE-CT.
    MOVE PAGE-CT TO PAGE-OUT.
    PERFORM MOVE-SPACES.
    WRITE PRINT-LINE BEFORE ADVANCING NEW-PAGE.
    MOVE HEADING-1 TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    MOVE HEADING-2 TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    MOVE HEADING-3 TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
```

```
        PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
        MOVE HEADING-4 TO PRINT-LINE.
        PERFORM PRINT-LINE-OUT.
        PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
        ADD 1 TO PAGE-CT.
    READ-RECORDS.
        READ SORTED-FILE AT END GO TO WRITE-FINAL-TOTALS.
    EDIT-RECORDS.
        MOVE ACCT-IN TO ACCT-OUT, FA-NOMINAL, DISK-ACCT.
        READ FINANCIAL-ACCT-TABFI INVALID KEY
            MOVE 1 TO ERR-CODE (1).
        IF ERR-CODE (1) NOT = 1
            MOVE FA-FUND-NO TO DISK-FUND-NO
            MOVE FA-ACCT-TYPE TO DISK-ACCT-TYPE.
        MOVE REQ-IN TO REQ-HOLD.
        IF FLAG-ON MOVE REQ-IN TO REQ-OUT
        ELSE MOVE SPACES TO REQ-OUT.
        MOVE COST-CTR-IN TO COST-CTR-OUT.
        EXAMINE QUANTITY-IN-ALPHA REPLACING ALL ' ' BY '0'.
        EXAMINE AMOUNT-IN         REPLACING ALL ' ' BY '0'.
        EXAMINE TOTAL-IN          REPLACING ALL ' ' BY '0'.
        EXAMINE COST-CTR-IN       REPLACING ALL ' ' BY '0'.
        IF COST-CTR-IN NOT NUMERIC MOVE 1 TO ERR-CODE (3)
            MOVE ZEROS TO COST-CTR-IN.
        IF COST-CTR-IN NOT = ZEROS THEN
            PERFORM FIND-COST-CNTR.
        MOVE AMT-IN TO AMOUNT-OUT, DISK-AMOUNT.
            ADD AMT-IN TO AMT-ACCUM, AMT-SUB-TOTAL.
        IF TOT-IN NOT = TO 0  THEN MOVE TOT-IN TO TOTAL-HOLD.
        MOVE 0 TO TOTAL-OUT.
    FILL-DISK-REC.
        MOVE REQ-IN TO DISK-SOURCE-DOC-NO.
        MOVE R-S-DATE TO DISK-SOURCE-DOC-DATE.
        MOVE SOURCE-CODE TO DISK-SOURCE-CODE.
        MOVE DESC-IN TO DISK-DESC-FIELD.
        MOVE QUANTITY-IN TO DISK-QUANTITY, QUANTITY-OUT.
        MOVE STOCK-NO-IN TO DISK-ITEM-NO, STOCK-NO-OUT.
    READ-NEXT-REC.
        PERFORM READ-RECORDS.
    CHECK-NEXT-REC.
        MOVE REQ-IN TO NUMERIC-HOLD.
        IF NUMERIC-HOLD = TO REQ-HOLD THEN
                             MOVE '0' TO PRINT-REQ-FLAG
                             GO TO WRITE-LINE-OUT.
        MOVE '1' TO PRINT-REQ-FLAG.
            MOVE TOTAL-HOLD TO TOTAL-OUT.
            IF TOTAL-HOLD NOT = TO AMT-ACCUM THEN
                             MOVE 1 TO ERR-CODE (7).
            MOVE ZEROS TO AMT-ACCUM, TOTAL-HOLD.
    WRITE-LINE-OUT.
    IF ERROR-CODE NOT = ZERO THEN
       PERFORM MOVE-IN-ERRORS VARYING I
          FROM 1 BY 1 UNTIL ERROR-CODE = ZEROS
    ELSE MOVE DATA-LINE TO PRINT-LINE
       PERFORM PRINT-LINE-OUT
       PERFORM WRITE-DISK-OUT
       MOVE SPACES TO DISK-OUT.
    IF FLAG-ON THEN
       PERFORM PAGE-OVFLOW THRU PAGE-OVFLOW-END.
    GO TO EDIT-RECORDS.
 FIND-COST-CNTR.
    IF CC-FIRST-2-DIGITS NOT = ZEROS THEN
       MOVE COST-CTR-IN TO CC-NOMINAL
       READ COST-CNTR-TABFI INVALID KEY
       MOVE 1 TO ERR-CODE (4)
    ELSE PERFORM SEARCH-CC.
    MOVE COST-CTR-IN TO DISK-COST-CNTR.
 MOVE-IN-ERRORS.
    IF ERR-CODE (I) NOT = ZEROS THEN
       MOVE ERR-LIST (I) TO COMMENT
       MOVE DATA-LINE TO PRINT-LINE
       PERFORM PRINT-LINE-OUT
       MOVE SPACES TO DATA-LINE
       MOVE ZERO TO ERR-CODE (I).
 PAGE-OVFLOW.
    IF LINE-CT NOT < MAX-LINE THEN
    PERFORM WRITE-HEADINGS.
 PAGE-OVFLOW-END.
    EXIT.
 SEARCH-CC.
    MOVE CC-SECOND-2-DIGITS TO SEARCH-NO.
    SET CC TO 1.
    SEARCH ALL COST-CNTRS AT END
       MOVE 1 TO ERR-CODE (4)
    WHEN CC-SIZE-2 (CC) = TO SEARCH-NO
       MOVE CC-SIZE-4 (CC) TO COST-CTR-IN.
 MOVE-SPACES.
    MOVE SPACES TO PRINT-LINE.
 PRINT-LINE-OUT.
    WRITE PRINT-LINE BEFORE ADVANCING 1.
    ADD 1 TO LINE-CT.
*   SORT  ROUTINE
*
 READ-SORT-INPUT.
    READ CARD-IN AT END GO TO READ-SORT-INPUT-END.
    IF ID1 NOT = TO SOURCE-CODE THEN
       WRITE PRINT-LINE FROM INPUT-CARD AFTER ADVANCING 1
    PERFORM MOVE-SPACES
       GO TO READ-SORT-INPUT.
    RELEASE SORT-INPUT FROM INPUT-CARD.
```

```
           GO TO READ-SORT-INPUT.
       READ-SORT-INPUT-END.
           EXIT.
       WRITE-SORT-OUTPUT.
           RETURN FILE-SORT RECORD INTO INPUT-RECS
               AT END GO TO WRITE-SORT-OUTPUT-END.
           WRITE INPUT-RECS.
           GO TO WRITE-SORT-OUTPUT.
       WRITE-SORT-OUTPUT-END.
           EXIT.
      *
      *    END SORT ROUTINE
      *
       WRITE-DISK-OUT.
           MOVE DISK-OUT TO SAVE-DISK-REC.
           WRITE DISK-OUT.
           MOVE '154-40     ' TO SAVE-ACCT.
           MOVE '0200' TO SAVE-FUND-ACCT.
           IF SAVE-AMOUNT > 0
               MULTIPLY -1 BY SAVE-AMOUNT GIVING SAVE-AMOUNT.
           MOVE SAVE-DISK-REC TO DISK-OUT.
           WRITE DISK-OUT.
           MOVE SPACES TO DISK-OUT, SAVE-DISK-REC.
       WRITE-FINAL-TOTALS.
           IF ERROR-CODE = TO ZERO THEN
               PERFORM WRITE-DISK-OUT.
           MOVE TOTAL-HOLD TO TOTAL-OUT.
           MOVE DATA-LINE TO PRINT-LINE.
           PERFORM PRINT-LINE-OUT.
           PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
           PERFORM PRINT-LINE-OUT.
           MOVE SPACES TO DATA-LINE.
           MOVE 'TOTAL' TO REQ-OUT.
           MOVE AMT-SUB-TOTAL TO AMOUNT-OUT.
           MOVE 'CREDIT ACCT # 154-40' TO COMMENT.
           MOVE DATA-LINE TO PRINT-LINE.
           PERFORM PRINT-LINE-OUT.
       CLOSE-FILES.
           CLOSE SORTED-FILE, FINANCIAL-ACCT-TABFI,
               SPECIAL-ACCT-TABFI, FINANCIAL-COST-ALLOCATION,
               COST-CNTR-TABFI, PRINT-OUT.
       E-O-J.
           STOP RUN.
/*
//
/*EOF
```

```
//          PGMNAME=WUASPRER
//COB.SYSIN  DD *
       IDENTIFICATION DIVISION.
       PROGRAM-ID. WUASPRER.
       AUTHOR. ACT SYSTEMS, INC
               SUITE 200
               807 W MORSE BLVD
               WINTER PARK, FLA 32789 .
       DATE-WRITTEN. OCT 8 1977.
       DATE-COMPILED.  OCT 10 1977.
       REMARKS. THIS PROGRAM EDITS THE PAYROLL REPORT DATA
                CARDS, TOTALS ALL COSTS, FLAGS ANY DISCREPANCIES.
       ENVIRONMENT DIVISION.
       CONFIGURATION SECTION.
       SOURCE-COMPUTER. IBM-370.
       OBJECT-COMPUTER. IBM-370.
       SPECIAL-NAMES.
           C01 IS NEW-PAGE.
       INPUT-OUTPUT  SECTION.
       FILE-CONTROL.
           SELECT CARD-IN
             ASSIGN TO UR-2540R-S-CARDIN
             ACCESS MODE IS SEQUENTIAL.
           SELECT PRINT-OUT
             ASSIGN TO UR-1403-S-PRINTOUT
             ACCESS MODE IS SEQUENTIAL.
           SELECT FINANCIAL-ACCT-TABFI
               ASSIGN TO DA-3330-I-FATABFI
               ACCESS MODE IS RANDOM
               NOMINAL KEY IS FA-NOMINAL
               RECORD KEY IS FA-NUMBER.
           SELECT COST-CNTR-TABFI
               ASSIGN TO DA-3330-I-CCTABFI
               ACCESS MODE IS RANDOM
               NOMINAL KEY IS CC-NOMINAL
               RECORD KEY IS CC-NUMBER.
           SELECT SPECIAL-ACCT-TABFI
               ASSIGN TO DA-3330-S-SATABFI
               ACCESS MODE IS SEQUENTIAL.
           SELECT FINANCIAL-COST-ALLOCATION
               ASSIGN TO UT-3330-S-FICALFI
               ACCESS MODE IS SEQUENTIAL.
      DATA DIVISION.
      FILE SECTION.
      FD  CARD-IN
          RECORD CONTAINS 80 CHARACTERS
          LABEL RECORDS ARE OMITTED
          DATA RECORD IS INPUT-RECS.
      01  INPUT-RECS.
          02  SOURCE-CODE-NO   PIC X.
```

```
           02  SOURCE-CODE-NO    PIC X.
           02  FILLER            PIC X.
           02  CARD-TYPE-IN      PIC X.
           02  FILLER            PIC X.
           02  EMPL-NO-IN.
               05  EMP1-IN       PIC X(3).
               05  EMP2-IN       PIC XX.
               05  EMP3-IN       PIC X(4).
           02  FILLER            PIC X.
           02  DATE-DATA-IN      PIC X(6).
           02  FILLER            PIC X.
           02  ACCT-IN           PIC X(10).
           02  FILLER            PIC X.
           02  COST-CTR-IN.
               05  CC-FIRST-2-DIGITS  PIC XX.
               05  CC-SECOND-2-DIGITS PIC XX.
           02  FILLER            PIC X.
           02  TOTAL-COST-IN     PIC X(10).
           02  TOT-COST-IN REDEFINES TOTAL-COST-IN PIC S9(8)V99.
           02  FILLER            PIC X(33).
       01  INPUT-RECS-1.
           02  FILLER            PIC X(14).
           02  DEDUCTIONS-IN     PIC X(63).
           02  FILLER            PIC X(3).
       01  INPUT-RECS-2.
           02  FILLER              PIC X(21).
           02  DEDUCTIONS OCCURS 8 TIMES PIC S9(5)V99.
           02  FILLER            PIC X(3).
      *
      *    THE ABOVE DEDUCTION ARRAY IS AS FOLLOWS.
      *
      *    1   W-H- TAX
      *    2   FICA
      *    3   STATE TAX
      *    4   PENSION
      *    5   LOCAL TAX I
      *    6   LOCAL TAX II
      *    7   NET
      *    8   NOT USED
      *    9   NOT USED
      *
       01  DATE-CARD.
           02  DATE-IN         PIC X(18).
           02  TITLE-IN        PIC X(24).
           02  FILLER          PIC X(38).
       FD  PRINT-OUT
           RECORD CONTAINS 133 CHARACTERS
           LABEL RECORDS ARE OMITTED
           DATA RECORD IS PRINT-LINE.
       01  PRINT-LINE          PIC X(133).
```

```
FD  COST-CNTR-TABFI
    BLOCK CONTAINS 8 RECORDS
    RECORD CONTAINS 30 CHARACTERS
    LABEL RECORDS ARE STANDARD
    DATA RECORD IS CC-REC.
01  CC-REC.
    02  CC-NUMBER          PIC 9(4).
    02  CC-NAME            PIC X(13) OCCURS 2 TIMES.
FD  FINANCIAL-ACCT-TABFI
    BLOCK CONTAINS 8 RECORDS
    RECORD CONTAINS 58 CHARACTERS
    LABEL RECORDS ARE STANDARD
    DATA RECORD IS FA-REC.
01  FA-REC.
    05  FA-NUMBER          PIC X(10).
    05  FA-NAME            PIC X(20) OCCURS 2 TIMES.
    05  FA-FUND-NO         PIC XX.
    05  FA-ACCT-TYPE       PIC XX.
    05  FA-MATCH-CODE      PIC X(4).
FD  SPECIAL-ACCT-TABFI
    BLOCK CONTAINS 0 RECORDS
    LABEL RECORDS ARE STANDARD
    DATA RECORD IS COST-CENTERS.
01  COST-CENTERS.
    05  RECORD-COUNT.
        10  NO-OF-RECS     PIC 9(4).
        10  FILLER         PIC X(18).
    05  COST-CNTRS OCCURS 1 TO 99 TIMES
        DEPENDING ON NO-OF-RECS
        ASCENDING KEY IS CC-SIZE-2
        INDEXED BY CC.
        10  CC-SIZE-2      PIC X(2).
        10  CC-SIZE-4      PIC X(4).
        10  FILLER         PIC X(16).
FD  FINANCIAL-COST-ALLOCATION
    BLOCK CONTAINS 5 RECORDS
    RECORD CONTAINS 100 CHARACTERS
    LABEL RECORDS ARE STANDARD
    DATA RECORD IS DISK-OUT.
01  DISK-OUT.
    05  DISK-ACCT          PIC X(10).
    05  DISK-COST-CNTR     PIC X(4).
    05  DISK-FUND-NO       PIC XX.
    05  DISK-ACCT-TYPE     PIC XX.
    05  FILLER             PIC XX.
    05  DISK-AMOUNT        PIC S9(8)V99.
    05  DISK-ITEM-NO       PIC X(8).
    05  DISK-QUANITY       PIC S9(5)V9.
    05  DISK-SOURCE-DOC-DATE  PIC X(6).
    05  DISK-SOURCE-CODE PIC X.
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           05  DISK-SOURCE-DOC-NO  PIC X(11).
           05  DISK-DESC-FIELD    PIC X(30).
           05  FILLER             PIC X(8).
       01  DATE-TITLE-REC.
           05  FILLER             PIC X.
           05  SORT-SEQUENCE      PIC X.
           05  DISK-DATE          PIC X(18).
           05  FILLER             PIC X(6).
           05  DISK-TITLE-1       PIC X(24).
           05  DISK-TITLE-2       PIC X(24).
           05  FILLER             PIC X(26).
       WORKING-STORAGE SECTION.
       77  SOURCE-CODE            PIC X VALUE '1'.
       77  SEARCH-NO              PIC XX VALUE SPACES.
       77  LINE-CT                PIC 99 VALUE 0.
       77  PAGE-CT                PIC 9(4) VALUE 0.
       77  TOTAL-ACCUM            PIC S9(8)V99 VALUE 0.
       77  CREDIT-SUBTOTAL        PIC S9(8)V99 VALUE 0.
       77  DEBIT-SUBTOTAL         PIC S9(8)V99 VALUE 0.
       77  CREDIT-TOTAL           PIC S9(8)V99 VALUE 0.
       77  DEBIT-TOTAL            PIC S9(8)V99 VALUE 0.
       77  EMPL-NO-HOLD           PIC X(9) VALUE SPACES.
       77  DATE-HOLD              PIC X(6) VALUE SPACES.
       77  VALUE-HOLD             PIC S9(8)V99 VALUE 0.
       77  I                      PIC 9 VALUE 0.
       77  J                      PIC 9 VALUE 0.
       77  MAX-LINE               PIC 99 VALUE 56.
       77  FA-NOMINAL             PIC X(10).
       77  CC-NOMINAL             PIC X(4).
       77  PRINT-EMPL-FLAG        PIC X VALUE '1'.
           88  FLAG-ON            VALUE '1'.
           88  FLAG-OFF           VALUE '0'.
       01  ACCOUNT-NUMBERS.
           05  ACCOUNT-NO         PIC X(90) VALUE
      -                          '241-42    241-40    241-41    926-21
      -              '241-43    241-44    241-46    241-49    131-40      '.
           05  ACCT-NO REDEFINES ACCOUNT-NO PIC X(10) OCCURS 9 TIMES.
       01  HEADING-1.
           02  FILLER             PIC X(59) VALUE SPACES.
           02  FILLER             PIC X(14) VALUE 'PAYROLL REPORT'.
           02  FILLER             PIC X(60) VALUE SPACES.
       01  HEADING-2.
           02  FILLER             PIC X VALUE SPACES.
           02  FILLER             PIC X(13) VALUE 'DATE ENDING: '.
           02  DATE-OUT           PIC X(18) VALUE SPACES.
           02  FILLER             PIC X(33) VALUE SPACES.
           02  FILLER             PIC X(3) VALUE 'FOR'.
           02  FILLER             PIC X(53) VALUE SPACES.
           02  FILLER             PIC X(5)  VALUE  'PAGE '.
           02  PAGE-OUT           PIC ZZZ9.
           02  FILLER                PIC X(3) VALUE SPACES.
       01  HEADING-3.
           02  FILLER                PIC X(54) VALUE SPACES.
           02  TITLE-OUT             PIC X(24) VALUE SPACES.
           02  FILLER                PIC X(55) VALUE SPACES.
       01  HEADING-4.
           02  FILLER                PIC X(5) VALUE SPACES.
           02  FILLER                PIC X(15) VALUE 'EMPLOYEE NUMBER'.
           02  FILLER                PIC X(6) VALUE SPACES.
           02  FILLER                PIC X(4) VALUE 'DATE'.
           02  FILLER                PIC X(4) VALUE SPACES.
           02  FILLER                PIC X(14) VALUE 'ACCOUNT NUMBER'.
           02  FILLER                PIC X(5) VALUE SPACES.
           02  FILLER                PIC X(11) VALUE 'COST CENTER'.
           02  FILLER                PIC X(6) VALUE SPACES.
           02  FILLER                PIC X(10) VALUE 'TOTAL COST'.
           02  FILLER                PIC X(3) VALUE SPACES.
           02  FILLER                PIC X(13) VALUE 'TOTAL CREDITS'.
           02  FILLER                PIC X(2)  VALUE SPACES.
           02  FILLER                PIC X(12) VALUE 'TOTAL DEBITS'.
           02  FILLER                PIC X(9)  VALUE SPACES.
           02  FILLER                PIC X(8) VALUE 'COMMENTS'.
           02  FILLER                PIC X(6) VALUE SPACES.
       01  DATA-LINE.
           02  FILLER                PIC X(7) VALUE SPACES.
           02  EMPL-NO-OUT.
               05  EMP1-OUT          PIC X(3).
               05  DASH1             PIC X VALUE '-'.
               05  EMP2-OUT          PIC XX.
               05  DASH2             PIC X VALUE '-'.
               05  EMP3-OUT          PIC X(4).
           02  FILLER                PIC X(7) VALUE SPACES.
           02  DATE-DATA-OUT         PIC X(6).
           02  FILLER                PIC X(5) VALUE SPACES.
           02  ACCT-OUT              PIC X(10).
           02  FILLER                PIC X(10) VALUE SPACES.
           02  COST-CTR-OUT          PIC X(4).
           02  FILLER                PIC X(8)  VALUE SPACES.
           02  TOTAL-COST-OUT        PIC -(8).--.
           02  FILLER                PIC X(4) VALUE SPACES.
           02  CREDIT-OUT            PIC -(8).--.
           02  FILLER                PIC X(4) VALUE SPACES.
           02  DEBIT-OUT             PIC -(8).--.
           02  FILLER                PIC X(4) VALUE SPACES.
           02  COMMENT               PIC X(20) VALUE SPACES.
       01  ERROR-CODE.
           02  ERR-CODE OCCURS 4 TIMES PIC X.
       01  ERROR-LIST.
               05  ERR-LIST1  PIC X(80) VALUE       'ACCOUNT # NOT FOUND
                                                    'DR & CR NOT EQUAL
```

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                                             'COST CNTR NOT VALID
                                           'VALUE IN NOT NUMERIC'.
    05  ERR-LIST REDEFINES ERR-LIST1 PIC X(20) OCCURS 4 TIMES.
PROCEDURE DIVISION.
OPEN-FILES.
    OPEN INPUT  CARD-IN,
                FINANCIAL-ACCT-TABFI, COST-CNTR-TABFI,
                SPECIAL-ACCT-TABFI,
         OUTPUT PRINT-OUT, FINANCIAL-COST-ALLOCATION.
READ-TITLE-CARD.
    READ CARD-IN AT END GO TO WRITE-FINAL-TOTALS.
    MOVE SPACES TO DISK-OUT.
    MOVE DATE-IN TO DATE-OUT, DISK-DATE.
    MOVE TITLE-IN TO TITLE-OUT, DISK-TITLE-1.
    MOVE SOURCE-CODE TO SORT-SEQUENCE.
    WRITE DISK-OUT.
    MOVE SPACES TO PRINT-LINE, DISK-OUT.
    MOVE ' THE FOLLOWING CARDS HAVE A INVALID SOURCE CODE'
        TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
HOUSEKEEPING.
    MOVE SPACES TO ERROR-CODE.
    READ SPECIAL-ACCT-TABFI AT END
        MOVE 'COST CENTER TABLE CONTAINS NO DATA' TO
        PRINT-LINE,
        PERFORM PRINT-LINE-OUT
        GO TO CLOSE-FILES.
WRITE-HEADINGS.
    MOVE 0 TO LINE-CT.
    ADD 1 TO PAGE-CT.
    MOVE PAGE-CT TO PAGE-OUT.
    PERFORM MOVE-SPACES.
    WRITE PRINT-LINE BEFORE ADVANCING NEW-PAGE.
    MOVE HEADING-1 TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    MOVE HEADING-2 TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    MOVE HEADING-3 TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
    MOVE HEADING-4 TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
READ-RECORDS.
    READ CARD-IN AT END GO TO WRITE-FINAL-TOTALS.
EDIT-RECORDS.
    MOVE SPACES TO DATA-LINE.
    IF CARD-TYPE-IN = '2'
        GO TO EDIT-SECOND-CARD.
        MOVE ACCT-IN TO ACCT-OUT, FA-NOMINAL, DISK-ACCT.
        PERFORM READ-FINANCIAL-ACCT-TABFI.
        MOVE COST-CTR-IN TO COST-CTR-OUT.
        IF EMPL-NO-HOLD = SPACES
            MOVE EMPL-NO-IN TO EMPL-NO-HOLD
            MOVE DATE-DATA-IN TO DATE-HOLD.
        EXAMINE INPUT-RECS REPLACING ALL ' ' BY '0'.
        IF FLAG-ON THEN
            MOVE EMP1-IN TO EMP1-OUT,
            MOVE EMP2-IN TO EMP2-OUT,
            MOVE EMP3-IN TO EMP3-OUT,
            MOVE '-' TO DASH1, DASH2,
            MOVE DATE-DATA-IN TO DATE-DATA-OUT.
        MOVE EMPL-NO-IN TO DISK-SOURCE-DOC-NO.
        MOVE DATE-DATA-IN TO DISK-SOURCE-DOC-DATE.
        MOVE SOURCE-CODE TO DISK-SOURCE-CODE.
    TEST-COST-CNTR.
        IF COST-CTR-IN NOT NUMERIC MOVE '1' TO ERR-CODE (3)
            MOVE ZEROS TO COST-CTR-IN.
        IF COST-CTR-IN NOT = ZEROS THEN
            PERFORM FIND-COST-CNTR.
        IF TOT-COST-IN NOT NUMERIC
            MOVE '1' TO ERR-CODE (4)
            MOVE ZEROS TO TOT-COST-IN.
        MOVE TOT-COST-IN TO TOTAL-COST-OUT, DISK-AMOUNT.
        ADD TOT-COST-IN TO TOTAL-ACCUM, DEBIT-SUBTOTAL, DEBIT-TOTAL.
        MOVE ZEROS TO CREDIT-OUT, DEBIT-OUT.
        IF ERROR-CODE = SPACES
            WRITE DISK-OUT.
        IF ERROR-CODE NOT = SPACES
            PERFORM MOVE-IN-ERRS
            GO TO READ-NEXT-RECORD.
        MOVE DATA-LINE TO PRINT-LINE.
        PERFORM PRINT-LINE-OUT.
        MOVE SPACES TO DATA-LINE, DISK-OUT.
        GO TO READ-NEXT-RECORD.
    EDIT-SECOND-CARD.
        EXAMINE DEDUCTIONS-IN REPLACING ALL ' ' BY '0'.
        MOVE 1 TO J.
        PERFORM MOVE-OUT-DEDUCTIONS THRU MOVE-OUT-DEDUCTIONS-END
            VARYING I FROM 1 BY 1 UNTIL I > 7.
    READ-NEXT-RECORD.
        PERFORM READ-RECORDS.
    CHECK-NEXT-REC.
        IF (EMPL-NO-IN = EMPL-NO-HOLD) AND (DATE-DATA-IN = DATE-HOLD)
            THEN MOVE '0' TO PRINT-EMPL-FLAG,
            GO TO EDIT-RECORDS.
        MOVE EMPL-NO-IN TO EMPL-NO-HOLD.
        MOVE DATE-DATA-IN TO DATE-HOLD.
    WRITE-SUB-TOTAL.
```

```
           MOVE '1' TO PRINT-EMPL-FLAG.
           MOVE SPACES TO DATA-LINE.
           MOVE CREDIT-SUBTOTAL TO CREDIT-OUT.
           MOVE DEBIT-SUBTOTAL TO DEBIT-OUT.
           IF TOTAL-ACCUM NOT = 0
               MOVE ERR-LIST (2) TO COMMENT.
           MOVE DATA-LINE TO PRINT-LINE.
           PERFORM PRINT-LINE-OUT.
           PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
           MOVE ZEROS TO CREDIT-SUBTOTAL, DEBIT-SUBTOTAL,
               TOTAL-ACCUM.
           MOVE SPACES TO DATA-LINE.
       RETURN-TO-EDIT-RECORDS.
           GO TO EDIT-RECORDS.
       FIND-COST-CNTR.
           IF CC-FIRST-2-DIGITS NOT = ZEROS THEN
               MOVE COST-CTR-IN TO CC-NOMINAL
               READ COST-CNTR-TABFI INVALID KEY
               MOVE '1' TO ERR-CODE (3)
           ELSE PERFORM SEARCH-CC.
           MOVE COST-CTR-IN TO DISK-COST-CNTR.
       MOVE-OUT-DEDUCTIONS.
           IF DEDUCTIONS (I) NOT NUMERIC
               MOVE ZEROS TO DEDUCTIONS (I).
           MULTIPLY -1 BY DEDUCTIONS (I) GIVING VALUE-HOLD.
           MOVE VALUE-HOLD TO TOTAL-COST-OUT, DISK-AMOUNT.
           ADD VALUE-HOLD TO TOTAL-ACCUM, CREDIT-SUBTOTAL, CREDIT-TOTAL.
           MOVE ACCT-NO (J) TO ACCT-OUT, DISK-ACCT, FA-NOMINAL.
           PERFORM READ-FINANCIAL-ACCT-TABFI.
           MOVE SPACES TO DISK-COST-CNTR, COST-CTR-OUT.
           PERFORM CHECK-ERROR-CODE.
           ADD 1 TO J.
           IF I NOT = 2
               GO TO MOVE-OUT-DEDUCTIONS-END.
           MOVE ACCT-NO (J) TO ACCT-OUT, DISK-ACCT, FA-NOMINAL.
           PERFORM READ-FINANCIAL-ACCT-TABFI.
           MOVE VALUE-HOLD TO DISK-AMOUNT.
           ADD VALUE-HOLD TO CREDIT-SUBTOTAL, CREDIT-TOTAL.
           PERFORM CHECK-ERROR-CODE.
           ADD 1 TO J.
           MOVE ACCT-NO (J) TO ACCT-OUT, DISK-ACCT, FA-NOMINAL.
           PERFORM READ-FINANCIAL-ACCT-TABFI.
           MOVE DEDUCTIONS (I) TO TOTAL-COST-OUT, DISK-AMOUNT.
           ADD DEDUCTIONS (I) TO DEBIT-SUBTOTAL, DEBIT-TOTAL.
           PERFORM CHECK-ERROR-CODE.
           ADD 1 TO J.
       MOVE-OUT-DEDUCTIONS-END.
           EXIT.
       MOVE-IN-ERRS.
           PERFORM MOVE-IN-ERRORS VARYING I
```

```
                  FROM 1 BY 1 UNTIL I > 4.
           MOVE-IN-ERRORS.
               IF ERR-CODE (I) NOT = SPACES
                  MOVE ERR-LIST (I) TO COMMENT
                  MOVE DATA-LINE TO PRINT-LINE
                  PERFORM PRINT-LINE-OUT
                  MOVE SPACES TO DATA-LINE ERR-CODE (I).
           SEARCH-CC.
               MOVE CC-SECOND-2-DIGITS TO SEARCH-NO.
               SET CC TO 1.
               SEARCH ALL COST-CNTRS AT END
                  MOVE '1' TO ERR-CODE (4)
               WHEN CC-SIZE-2 (CC) = TO SEARCH-NO
                  MOVE CC-SIZE-4 (CC) TO COST-CTR-IN.
           CHECK-ERROR-CODE.
               IF ERROR-CODE = SPACES
                  WRITE DISK-OUT
                  MOVE DATA-LINE TO PRINT-LINE
                  PERFORM PRINT-LINE-OUT
               ELSE PERFORM MOVE-IN-ERRS.
           READ-FINANCIAL-ACCT-TABFI.
               READ FINANCIAL-ACCT-TABFI INVALID KEY
                  MOVE '1' TO ERR-CODE (1).
               IF ERR-CODE (1) NOT = '1'
                  MOVE FA-FUND-NO TO DISK-FUND-NO
                  MOVE FA-ACCT-TYPE TO DISK-ACCT-TYPE.
           MOVE-SPACES.
               MOVE SPACES TO PRINT-LINE.
           PRINT-LINE-OUT.
               WRITE PRINT-LINE BEFORE ADVANCING 1.
               ADD 1 TO LINE-CT.
               IF LINE-CT > MAX-LINE
                  PERFORM WRITE-HEADINGS.
           WRITE-FINAL-TOTALS.
               PERFORM WRITE-SUB-TOTAL.
               MOVE CREDIT-TOTAL TO CREDIT-OUT.
               MOVE DEBIT-TOTAL TO DEBIT-OUT.
               MOVE DATA-LINE TO PRINT-LINE.
               PERFORM PRINT-LINE-OUT.
           CLOSE-FILES.
               CLOSE FINANCIAL-ACCT-TABFI,
                   SPECIAL-ACCT-TABFI, FINANCIAL-COST-ALLOCATION,
                   COST-CNTR-TABFI, PRINT-OUT.
           E-O-J.
               STOP RUN.
/*
//
/*EOF
```

```
//          PGMNAME=WUASCDER
//COB.SYSIN  DD *
       IDENTIFICATION DIVISION.
       PROGRAM-ID. WUASCDER.
       AUTHOR. ACT SYSTEMS, INC
               SUITE 200
               807 W MORSE BLVD
               WINTER PARK, FLA 32789 .
       DATE-WRITTEN. SEPT 1979.
       DATE-COMPILED.
       REMARKS. THIS PROGRAM EDITS THE CASHIERS DAILY REPORTS.
       ENVIRONMENT DIVISION.
       CONFIGURATION SECTION.
       SOURCE-COMPUTER. IBM-370.
       OBJECT-COMPUTER. IBM-370.
       SPECIAL-NAMES.
           C01 IS NEW-PAGE.
       INPUT-OUTPUT  SECTION.
       FILE-CONTROL.
           SELECT CARD-IN
             ASSIGN TO UR-2540R-S-CARDIN
             ACCESS MODE IS SEQUENTIAL.
           SELECT FILE-SORT
             ASSIGN TO UT-3330-S-FILESORT
             ACCESS MODE IS SEQUENTIAL.
           SELECT SORTED-FILE
             ASSIGN TO UT-3330-S-SORTEDFI
             ACCESS MODE IS SEQUENTIAL.
           SELECT PRINT-OUT
             ASSIGN TO UR-1403-S-PRINTOUT
             ACCESS MODE IS SEQUENTIAL.
           SELECT FINANCIAL-ACCT-TABFI
               ASSIGN TO DA-3330-I-FATABFI
               ACCESS MODE IS RANDOM
               NOMINAL KEY IS FA-NOMINAL
               RECORD KEY IS FA-NUMBER.
           SELECT FINANCIAL-COST-ALLOCATION
               ASSIGN TO UT-3330-S-FICALFI
               ACCESS MODE IS SEQUENTIAL.
       DATA DIVISION.
       FILE SECTION.
       FD  CARD-IN
           RECORD CONTAINS 80 CHARACTERS
           LABEL RECORDS ARE OMITTED
           DATA RECORD IS INPUT-CARD.
       01  INPUT-CARD.
           02  ID1 PIC X.
           02  ID2 PIC X(79).
       01  DATE-CARD.
           02  RUN-DATE-IN       PIC X(18).
           02  TITLE-IN        PIC X(24).
           02  FILLER          PIC X(38).
       SD  FILE-SORT
           RECORD CONTAINS 80 CHARACTERS
           DATA RECORD IS SORT-INPUT.
       01  SORT-INPUT.
           02  S-SOURCE-CODE-NO PIC X.
           02  FILLER           PIC X.
           02  S-DATE           PIC X(6).
           02  FILLER           PIC X.
           02  S-FORM           PIC X(5).
           02  FILLER           PIC X.
           02  S-SECTION        PIC X.
           02  FILLER           PIC X(64).
       FD  SORTED-FILE
           RECORD CONTAINS 80 CHARACTERS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS INPUT-RECS.
       01  INPUT-RECS.
           02  SOURCE-CODE-NO   PIC X.
           02  FILLER           PIC X.
           02  DATE-IN          PIC X(6).
           02  FILLER           PIC X.
           02  FORM-IN          PIC X(5).
           02  FILLER           PIC X.
           02  SECTION-IN       PIC X.
           02  FILLER           PIC X.
           02  ACCT-IN.
               05  FILLER       PIC X(8).
               05  FRS-UTIL-CODE PIC X.
               05  FILLER       PIC X.
           02  FILLER           PIC X.
           02  UTIL-CODE-OVRIDE PIC X.
           02  FILLER           PIC X.
           02  AMOUNT-IN        PIC X(10).
           02  AMT-IN REDEFINES AMOUNT-IN PIC S9(8)V99.
           02  FILLER           PIC X.
           02  DESC-IN          PIC X(30).
           02  FILLER           PIC X(9).
       FD  PRINT-OUT
           RECORD CONTAINS 133 CHARACTERS
           LABEL RECORDS ARE OMITTED
           DATA RECORD IS PRINT-LINE.
       01  PRINT-LINE       PIC X(133).
       FD  FINANCIAL-ACCT-TABFI
           BLOCK CONTAINS 8 RECORDS
           RECORD CONTAINS 58 CHARACTERS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS FA-REC.
       01  FA-REC.
```

```
           05  FA-NUMBER          PIC X(10).
           05  FA-NAME            PIC X(20) OCCURS 2 TIMES.
           05  FA-FUND-NO         PIC XX.
           05  FA-ACCT-TYPE       PIC XX.
           05  FILLER             PIC X(4).
       FD  FINANCIAL-COST-ALLOCATION
           BLOCK CONTAINS 5 RECORDS
           RECORD CONTAINS 100 CHARACTERS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS DISK-OUT.
       01  DISK-OUT.
           05  DISK-ACCT          PIC X(10).
           05  DISK-COST-CNTR     PIC X(4).
           05  DISK-FUND-NO       PIC XX.
           05  DISK-ACCT-TYPE     PIC XX.
           05  FILLER             PIC XX.
           05  DISK-AMOUNT        PIC S9(8)V99.
           05  DISK-ITEM-NO       PIC X(8).
           05  DISK-QUANITY       PIC S9(5)V9.
           05  DISK-SOURCE-DOC-DATE  PIC X(6).
           05  DISK-SOURCE-CODE PIC X.
           05  DISK-SOURCE-DOC-NO PIC X(11).
           05  DISK-DESC-FIELD    PIC X(30).
           05  FILLER             PIC X(8).
       01  DATE-TITLE-REC.
           05  FILLER             PIC X.
           05  SORT-SEQUENCE      PIC X.
           05  DISK-DATE          PIC X(18).
           05  FILLER             PIC X(6).
           05  DISK-TITLE-1       PIC X(24).
           05  DISK-TITLE-2       PIC X(24).
           05  FILLER             PIC X(26).
       WORKING-STORAGE SECTION.
       77  SOURCE-CODE            PIC X VALUE '7'.
       77  LINE-CT                PIC 99 VALUE 0.
       77  PAGE-CT                PIC 9(4) VALUE 1.
       77  MAX-LINE               PIC 99 VALUE 56.
       77  FA-NOMINAL             PIC X(10).
       77  DATE-HOLD              PIC X(6)  VALUE SPACES.
       77  FORM-HOLD              PIC X(5)  VALUE SPACES.
       77  AMT-HOLD               PIC S9(8)V99.
       77  ACCUM                  PIC S9(8)V99 VALUE 0.
       77  CREDIT-SUBTOTAL        PIC S9(8)V99 VALUE 0.
       77  CREDIT-TOTAL           PIC S9(8)V99 VALUE 0.
       77  DEBIT-SUBTOTAL         PIC S9(8)V99 VALUE 0.
       77  DEBIT-TOTAL            PIC S9(8)V99 VALUE 0.
       77  ACCT-NO-ERROR          PIC X VALUE SPACES.
       01  HEADING-1.
           05  FILLER             PIC X(63) VALUE SPACES.
           05  FILLER             PIC X(21) VALUE 'CASHIERS DAILY REPORT'.
```

```
          05  FILLER             PIC X(48) VALUE SPACES.
       01 HEADING-2.
          02  FILLER             PIC X(6)  VALUE SPACES.
          02  FILLER             PIC X(13) VALUE 'DATE ENDING: '.
          02  RUN-DATE-OUT       PIC X(18) VALUE SPACES.
          02  FILLER             PIC X(35) VALUE SPACES.
          02  FILLER             PIC X(3) VALUE 'FOR'.
          02  FILLER             PIC X(47) VALUE SPACES.
          02  FILLER             PIC X(5)  VALUE  'PAGE '.
          02  PAGE-OUT           PIC ZZZ9.
       01 HEADING-3.
          02  FILLER             PIC X(62) VALUE SPACES.
          02  TITLE-OUT          PIC X(24) VALUE SPACES.
          02  FILLER             PIC X(46) VALUE SPACES.
       01 HEADING-4.
          02  FILLER             PIC X(16) VALUE SPACES.
          02  FILLER             PIC X(4)  VALUE 'DATE'.
          02  FILLER             PIC X(6)  VALUE SPACES.
          02  FILLER             PIC X(11) VALUE 'FORM NUMBER'.
          02  FILLER             PIC X(5)  VALUE SPACES.
          02  FILLER             PIC X(14) VALUE 'ACCOUNT NUMBER'.
          02  FILLER             PIC X(7)  VALUE SPACES.
          02  FILLER             PIC X(6)  VALUE 'AMOUNT'.
          02  FILLER             PIC X(8)  VALUE SPACES.
          02  FILLER             PIC X(13) VALUE 'TOTAL CREDITS'.
          02  FILLER             PIC X(5)  VALUE SPACES.
          02  FILLER             PIC X(12) VALUE 'TOTAL DEBITS'.
          02  FILLER             PIC X(11) VALUE SPACES.
          02  FILLER             PIC X(8)  VALUE 'COMMENTS'.
          02  FILLER             PIC X(6)  VALUE SPACES.
       01 DATA-LINE.
          02  FILLER             PIC X(15).
          02  DATE-OUT           PIC X(6).
          02  FILLER             PIC X(8).
          02  FORM-OUT           PIC X(5).
          02  FILLER             PIC X(10).
          02  ACCT-OUT           PIC X(10).
          02  FILLER             PIC X(3).
          02  AMT-OUT            PIC -(8).--.
          02  FILLER             PIC X(6).
          02  CREDIT-OUT         PIC -(8).--.
          02  FILLER             PIC X(5).
          02  DEBIT-OUT          PIC -(8).--.
          02  FILLER             PIC X(8).
          02  COMMENT-OUT        PIC X(20).
       01 SAVE-DISK.
          05  SAVE-ACCT          PIC X(10).
          05  FILLER             PIC X(90).
       PROCEDURE DIVISION.
       OPEN-FILES.
```

```
         OPEN INPUT CARD-IN.
         OPEN OUTPUT PRINT-OUT, SORTED-FILE,
                  FINANCIAL-COST-ALLOCATION.
     READ-TITLE-CARD.
         READ CARD-IN AT END GO TO WRITE-FINAL-TOTALS.
         MOVE SPACES TO DISK-OUT.
         MOVE RUN-DATE-IN TO RUN-DATE-OUT, DISK-DATE.
         MOVE TITLE-IN TO TITLE-OUT, DISK-TITLE-1.
         MOVE SOURCE-CODE TO SORT-SEQUENCE.
         WRITE DISK-OUT.
         MOVE SPACES TO PRINT-LINE, DISK-OUT.
         MOVE ' THE FOLLOWING CARDS HAVE A INVALID SOURCE CODE'
              TO PRINT-LINE.
         PERFORM PRINT-LINE-OUT.
         PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
     SORT-RECORDS.
         SORT FILE-SORT ON ASCENDING KEY
              S-DATE
              S-FORM
              S-SECTION
         INPUT PROCEDURE READ-SORT-INPUT
              THRU READ-SORT-INPUT-END
         OUTPUT PROCEDURE WRITE-SORT-OUTPUT
              THRU WRITE-SORT-OUTPUT-END.
     CLOSE-SORT-FILES.
         CLOSE SORTED-FILE, CARD-IN.
         OPEN INPUT SORTED-FILE, FINANCIAL-ACCT-TABFI.
     HOUSEKEEPING.
         MOVE SPACES TO DATA-LINE.
     WRITE-HEADINGS.
         MOVE 0 TO LINE-CT.
         MOVE PAGE-CT TO PAGE-OUT.
         PERFORM MOVE-SPACES.
         WRITE PRINT-LINE BEFORE ADVANCING NEW-PAGE.
         MOVE HEADING-1 TO PRINT-LINE.
         PERFORM PRINT-LINE-OUT.
         MOVE HEADING-2 TO PRINT-LINE.
         PERFORM PRINT-LINE-OUT.
         MOVE HEADING-3 TO PRINT-LINE.
         PERFORM PRINT-LINE-OUT.
         PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
         MOVE HEADING-4 TO PRINT-LINE.
         PERFORM PRINT-LINE-OUT.
         PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
         ADD 1 TO PAGE-CT.
     GET-FIRST-REC.
         PERFORM READ-RECORDS.
         MOVE DATE-IN TO DATE-HOLD, DATE-OUT.
         MOVE FORM-IN TO FORM-HOLD, FORM-OUT.
     EDIT-RECORDS.
```

```
           EXAMINE AMOUNT-IN REPLACING ALL ' ' BY '0'.
           IF AMOUNT-IN NOT NUMERIC
               MOVE ZERO TO AMT-IN
               MOVE 'NON NUMERIC NO' TO COMMENT-OUT.
           IF (SECTION-IN NOT = 'D') AND (AMT-IN > 0)
               MULTIPLY -1 BY AMT-IN GIVING AMT-HOLD
               MOVE AMT-HOLD TO AMT-IN.
           IF SECTION-IN = 'B' GO TO EDIT-ACCT-NO.
       TEST-SECTION-A.
           IF SECTION-IN NOT = 'A'
               GO TO TEST-SECTION-C.
           IF ACCT-IN = SPACES
               MOVE '142-10     ' TO ACCT-IN.
           GO TO EDIT-ACCT-NO.
       TEST-SECTION-C.
           IF SECTION-IN NOT = 'C'
               GO TO TEST-SECTION-D.
           IF ACCT-IN = SPACES
               MOVE '271-20     ' TO ACCT-IN.
           GO TO EDIT-ACCT-NO.
       TEST-SECTION-D.
           IF ACCT-IN = SPACES
               MOVE '131-10     ' TO ACCT-IN.
       EDIT-ACCT-NO.
           MOVE UTIL-CODE-OVRIDE TO FRS-UTIL-CODE.
           MOVE ACCT-IN TO ACCT-OUT, FA-NOMINAL, DISK-ACCT.
           READ FINANCIAL-ACCT-TABFI INVALID KEY
               MOVE 'INVALID ACCT NO' TO COMMENT-OUT
               MOVE '1' TO ACCT-NO-ERROR
               GO TO EDIT-AMOUNTS.
           MOVE FA-FUND-NO TO DISK-FUND-NO.
           MOVE FA-ACCT-TYPE TO DISK-ACCT-TYPE.
       EDIT-AMOUNTS.
           MOVE AMT-IN TO AMT-OUT, DISK-AMOUNT.
           ADD AMT-IN TO ACCUM.
           IF AMT-IN > 0
               ADD AMT-IN TO DEBIT-SUBTOTAL DEBIT-TOTAL
           ELSE ADD AMT-IN TO CREDIT-SUBTOTAL CREDIT-TOTAL.
       FILL-DISK-REC.
           MOVE FORM-IN TO DISK-SOURCE-DOC-NO.
           MOVE DATE-IN TO DISK-SOURCE-DOC-DATE.
           MOVE SOURCE-CODE TO DISK-SOURCE-CODE.
           MOVE DESC-IN TO DISK-DESC-FIELD.
           IF ACCT-NO-ERROR = SPACES
               PERFORM WRITE-DISK-OUT.
           MOVE SPACES TO DISK-OUT.
           MOVE DATA-LINE TO PRINT-LINE.
           PERFORM PRINT-LINE-OUT.
           MOVE SPACES TO DATA-LINE, ACCT-NO-ERROR.
       READ-NEXT-REC.
```

```
    PERFORM READ-RECORDS.
CHECK-NEXT-REC.
    IF (DATE-IN = DATE-HOLD) AND (FORM-IN = FORM-HOLD)
        PERFORM PAGE-OVFLOW
        GO TO EDIT-RECORDS.
WRITE-SUB-TOTALS.
    MOVE SPACES TO DATA-LINE.
    IF ACCUM NOT = 0
        MOVE 0 TO ACCUM
        MOVE 'CR & DR NOT BALANCE' TO COMMENT-OUT.
    MOVE CREDIT-SUBTOTAL TO CREDIT-OUT.
    MOVE DEBIT-SUBTOTAL TO DEBIT-OUT.
    MOVE DATA-LINE TO PRINT-LINE.
    PERFORM PRINT-LINE-OUT.
    MOVE SPACES TO DATA-LINE.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
    PERFORM PRINT-LINE-OUT 2 TIMES.
    PERFORM PAGE-OVFLOW.
    MOVE DATE-IN TO DATE-HOLD, DATE-OUT.
    MOVE FORM-IN TO FORM-HOLD, FORM-OUT.
    MOVE ZEROS TO CREDIT-SUBTOTAL, DEBIT-SUBTOTAL.
RETURN-TO-EDIT-RECORDS.
    GO TO EDIT-RECORDS.
PAGE-OVFLOW.
    IF LINE-CT > MAX-LINE
        MOVE 0 TO LINE-CT
        PERFORM WRITE-HEADINGS.
MOVE-SPACES.
    MOVE SPACES TO PRINT-LINE.
PRINT-LINE-OUT.
    WRITE PRINT-LINE BEFORE ADVANCING 1.
    ADD 1 TO LINE-CT.
READ-RECORDS.
    READ SORTED-FILE AT END GO TO WRITE-FINAL-TOTALS.
*
*   SORT  ROUTINE
*
READ-SORT-INPUT.
    READ CARD-IN AT END GO TO READ-SORT-INPUT-END.
    IF ID1 NOT = TO SOURCE-CODE THEN
        WRITE PRINT-LINE FROM INPUT-CARD AFTER ADVANCING 1
    PERFORM MOVE-SPACES
        GO TO READ-SORT-INPUT.
    RELEASE SORT-INPUT FROM INPUT-CARD.
    GO TO READ-SORT-INPUT.
READ-SORT-INPUT-END.
    EXIT.
WRITE-SORT-OUTPUT.
    RETURN FILE-SORT RECORD INTO INPUT-RECS
        AT END GO TO WRITE-SORT-OUTPUT-END.
```

```
     WRITE INPUT-RECS.
     GO TO WRITE-SORT-OUTPUT.
 WRITE-SORT-OUTPUT-END.
     EXIT.
*
*    END SORT ROUTINE
*
 WRITE-DISK-OUT.
     MOVE SPACES TO SAVE-DISK.
     IF  DISK-ACCT = '461-00  I ' OR '470-00  I ' OR '474-10  I '
         MOVE DISK-OUT TO SAVE-DISK.
     PERFORM WRITE-DISK-REC.
     IF SAVE-ACCT = '461-00  I '
         MOVE '461-10    ' TO SAVE-ACCT
         MOVE SAVE-DISK TO DISK-OUT
         PERFORM WRITE-DISK-REC.
     IF SAVE-ACCT = '470-00  I '
         MOVE '470-10    ' TO SAVE-ACCT
         MOVE SAVE-DISK TO DISK-OUT
         PERFORM WRITE-DISK-REC.
     IF SAVE-ACCT = '474-10  I '
         MOVE '474-15    ' TO SAVE-ACCT
         MOVE SAVE-DISK TO DISK-OUT
         PERFORM WRITE-DISK-REC.
 WRITE-DISK-REC.
     WRITE DISK-OUT.
 WRITE-FINAL-TOTALS.
     PERFORM WRITE-SUB-TOTALS.
     PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
     PERFORM PRINT-LINE-OUT 2 TIMES.
     MOVE SPACES TO DATA-LINE.
     MOVE CREDIT-TOTAL TO CREDIT-OUT.
     MOVE DEBIT-TOTAL TO DEBIT-OUT.
     MOVE DATA-LINE TO PRINT-LINE.
     PERFORM PRINT-LINE-OUT.
 CLOSE-FILES.
     CLOSE SORTED-FILE, FINANCIAL-ACCT-TABFI,
         FINANCIAL-COST-ALLOCATION, PRINT-OUT.
 E-O-J.
     STOP RUN.

/*
//
/*EOF
```

```
//        PGMNAME=WUASDTFI
       IDENTIFICATION DIVISION.
       PROGRAM-ID. WUASDTFI.
       AUTHOR. ACT SYSTEMS, INC
               SUITE 200
               807 W MORSE BLVD
               WINTER PARK, FLA 32789.
       DATE-WRITTEN. MAY 1979.
       REMARKS.    THIS PROGRAM CREATES AND COMPUTES A
                   DATE-TITLE AND WATER FLOW DATA BASE
                   ON A  DISK FILE.
       ENVIRONMENT DIVISION.
       CONFIGURATION SECTION.
       SOURCE-COMPUTER. IBM-370-168.
       OBJECT-COMPUTER. IBM-370-168.
       SPECIAL-NAMES.
           C01 IS NEW-PAGE.
       INPUT-OUTPUT SECTION.
       FILE-CONTROL.
           SELECT CARD-IN
               ASSIGN TO UR-2540R-S-CARDIN
               ACCESS MODE IS SEQUENTIAL.
           SELECT PRINT-OUT
               ASSIGN TO UR-1403-S-PRINTOUT
               ACCESS MODE IS SEQUENTIAL.
           SELECT DATE-TITLE-FILE
               ASSIGN TO UT-3330-S-DATEFILE
               ACCESS MODE IS SEQUENTIAL.
       DATA DIVISION.
       FILE SECTION.
       FD  CARD-IN
           RECORD CONTAINS 80 CHARACTERS
           LABEL RECORDS ARE OMITTED
           DATA RECORD IS INPUT-REC.
       01  INPUT-REC               PIC X(80).
       01  FIRST-CARD.
           05  CARD-SEQUENCE       PIC 9.
           05  FILLER              PIC X.
           05  CURRENT-DATE-IN     PIC X(18).
           05  FILLER              PIC X.
           05  CURRENT-MONTH       PIC 99.
           05  FILLER              PIC X.
           05  BEGINNING-DATE      PIC X(18).
           05  FILLER              PIC X.
           05  REPORT-PERIOD-ALPHA PIC X(7).
           05  FILLER              PIC X.
           05  REPORT-PERIOD-NUMERIC PIC 99.
           05  FILLER              PIC X.
           05  CONVERSION-FACTOR PIC V999.
           05  FILLER              PIC X.
```

```
      05  NO-OF-ZONES       PIC 99.
      05  FILLER            PIC X.
      05  TYPE-OF-SYSTEM    PIC 99.
      05  FILLER            PIC X.
      05  UTILITY-CODE      PIC XX.
      05  FILLER            PIC X(12).
      05  NO-OF-SUB-UTILITIES PIC 99.
 01   SECOND-CARD.
      05  FILLER            PIC XX.
      05  TITLE-1           PIC X(24).
      05  FILLER            PIC X.
      05  TITLE-2           PIC X(24).
      05  FILLER            PIC X.
      05  FILLER            PIC X(26).
      05  UTILITY-CODE-1    PIC XX.
 01   THIRD-AND-FOURTH-CARD.
      05  FILLER            PIC X(10).
      05  WATER-FLOW-MG     PIC 9(7)V999 OCCURS 7 TIMES.
*****
*     ON THE ABOVE THIRD-AND-FOURTH-CARD THE FIRST CARD (3 RD)
*     IS THE TREATED WATER AND IF THERE IS A SECOND (4 TH)
*     CARD IT CONTAINS THE YTD VALUES PRIOR TO THIS PERIOD OF
*     CALCULATIONS.
*
*     THE FIRST VALUE IS THE TOTAL MG WITH THE NEXT 6 VALUES BEING
*     THE ZONES FOR THAT TOTAL
*****
 FD   PRINT-OUT
      RECORD CONTAINS 133 CHARACTERS
      LABEL RECORDS ARE OMITTED
      DATA RECORD IS PRINT-LINE.
 01   PRINT-LINE.
      05  FILLER            PIC X.
      05  PRINT-DATA        PIC X(132).
 FD   DATE-TITLE-FILE
      RECORD CONTAINS 316 CHARACTERS
      BLOCK CONTAINS 2 RECORDS
      LABEL RECORDS ARE STANDARD
      DATA RECORD IS OUTPUT-REC.
 01   OUTPUT-REC.
      05  CURRENT-DATE-OUT PIC X(18).
      05  CURRENT-MONTH-OUT PIC 99.
      05  BEGINNING-DATE-OUT PIC X(18).
      05  REPORT-PERIOD-ALPHA-OUT PIC X(7).
      05  REPORT-PERIOD-NUMERIC-OUT PIC 99.
      05  CONVERSION-FACTOR-OUT PIC V999.
      05  NO-OF-ZONES-OUT   PIC 99.
      05  TYPE-OF-SYSTEM-OUT PIC 99.
      05  UTILITY-CODE-OUT PIC XX.
      05  NO-OF-UTILS-OUT   PIC 99.
```

```
           05  TITLE-1-OUT        PIC X(24).
           05  TITLE-2-OUT        PIC X(24).
           05  TREATED-WATER.
               10  TREATED-MG     PIC 9(7)V999 OCCURS 7 TIMES.
           05  BILLED-WATER.
               10  BILLED-MG      PIC 9(7)V999 OCCURS 7 TIMES.
           05  YTD-WATER.
               10  YTD-MG         PIC 9(7)V999 OCCURS 7 TIMES.
      ****
      *    THE 2ND THRU N TH REOCRDS WILL CONTAIN ONLY TITLE
      *    AND UTILITY CODES OF SUB UTILITIES (MAX = 9 )
      ****
       WORKING-STORAGE SECTION.
       77  I                      PIC 99.
       77  NO-OF-UTILS-HOLD       PIC 99.
       77  CONV-FACTOR            PIC V999.
       77  INPUT-COUNT            PIC 9 VALUE 1.
       01  YTD-VALUES-HOLD.
           05  FILLER             PIC X(10).
           05  VALUES-HOLD OCCURS 7 TIMES PIC 9(7)V999.
       01  WATER-FLOW-HOLD.
           05  FILLER             PIC X(10).
           05  VALUES-1-HOLD OCCURS 7 TIMES PIC 9(7)V999.
       01  HEADING-1.
           05  FILLER             PIC X(54) VALUE SPACES.
           05  FILLER             PIC X(24) VALUE 'WATER FLOW DATA BASE FO
      -                                       'R'.
           05  FILLER             PIC X(54) VALUE SPACES.
       01  HEADING-2.
           05  FILLER             PIC X(50) VALUE SPACES.
           05  FILLER             PIC X(33) VALUE 'FINANCIAL COST ACCOUNTI
      -                                       'NG SYSTEM'.
           05  FILLER             PIC X(49) VALUE SPACES.
       01  DATA-LINE-1.
           05  NAME-1             PIC X(17) VALUE ' NAME OF UTILITY:'.
           05  FILLER             PIC X(06) VALUE SPACES.
           05  UTIL-CATEGORY      PIC X(11) VALUE 'MAJOR      '.
           05  FILLER             PIC X(02) VALUE SPACES.
           05  TITLES-OUT OCCURS 2 TIMES.
               10  TITLE-OUT      PIC X(24).
               10  FILLER         PIC X.
           05  FILLER             PIC X(4)  VALUE SPACES.
           05  FILLER             PIC X(14) VALUE 'UTILITY CODE: '.
           05  FILLER             PIC X VALUE QUOTE.
           05  UTIL-CODE          PIC XX.
           05  FILLER             PIC X VALUE QUOTE.
           05  FILLER             PIC X(3)  VALUE SPACES.
           05  NAME-2             PIC X(16) VALUE 'NO OF SUB UTILS:'.
           05  FILLER             PIC X(01) VALUE SPACES.
           05  NO-OF-UTIL         PIC ZZ.
```

```
 01  DATA-LINE-2.
     05  FILLER              PIC X(7)  VALUE ' DATES:'.
     05  FILLER              PIC X(16) VALUE SPACES.
     05  FILLER              PIC X(13) VALUE 'CURRENT      '.
     05  DATE-1              PIC X(18).
     05  FILLER              PIC X(78) VALUE SPACES.
 01  DATA-LINE-3.
     05  FILLER              PIC X(23) VALUE SPACES.
     05  FILLER              PIC X(13) VALUE 'NUMERICAL    '.
     05  DATE-2              PIC 99.
     05  FILLER              PIC X(94) VALUE SPACES.
 01  DATA-LINE-4.
     05  FILLER              PIC X(23) VALUE SPACES.
     05  FILLER              PIC X(13) VALUE 'BEGINNING    '.
     05  DATE-3              PIC X(18).
     05  FILLER              PIC X(78) VALUE SPACES.
 01  DATA-LINE-5.
     05  FILLER              PIC X(26) VALUE ' WATER CONVERSION FACTO
-                                    'R:'.
     05  FILLER              PIC X(10) VALUE SPACES.
     05  FACTOR-OUT          PIC 99.9.
     05  FILLER              PIC X(2)  VALUE ' %'.
     05  FILLER              PIC X(90) VALUE SPACES.
 01  DATA-LINE-6.
     05  FILLER              PIC X(17) VALUE ' NUMBER OF ZONES:'.
     05  FILLER              PIC X(19) VALUE SPACES.
     05  ZONES-OUT           PIC Z9.
     05  FILLER              PIC X(94) VALUE SPACES.
 01  DATA-LINE-7.
     05  FILLER              PIC X(16) VALUE ' TYPE OF SYSTEM:'.
     05  FILLER              PIC X(20) VALUE SPACES.
     05  SYSTEM-OUT          PIC Z9.
     05  FILLER              PIC X(28) VALUE SPACES.
     05  FILLER              PIC X(66) VALUE '1 = SERIES, 2 = PARALLE
-                                    'L, 3 = PAR-SERIES, 4 =
-                                    'SERIES-PAR-SERIES   '.
 01  DATA-LINE-8.
     05  FILLER              PIC X(15) VALUE ' REPORT PERIOD:'.
     05  FILLER              PIC X(8)  VALUE SPACES.
     05  FILLER              PIC X(13) VALUE 'ALPHA        '.
     05  RPT-PERIOD-1        PIC X(7).
     05  FILLER              PIC X(89) VALUE SPACES.
 01  DATA-LINE-9.
     05  FILLER              PIC X(23) VALUE SPACES.
     05  FILLER              PIC X(13) VALUE 'NUMERICAL    '.
     05  RPT-PERIOD-2        PIC Z9.
     05  FILLER              PIC X(28) VALUE SPACES.
     05  FILLER              PIC X(48) VALUE '1 = MONTHLY, 2 = QUARTE
-                                    'RLY, 3 = HALF, 4 = ANNU
-                                    'AL'.
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         05  FILLER           PIC X(18) VALUE SPACES.
     01  DATA-LINE-10.
         05  FILLER           PIC X(28) VALUE ' COMPUTED WATER VALUES
    -                                         '(MG):'.
         05  FILLER           PIC X(12) VALUE SPACES.
         05  FILLER           PIC X(05) VALUE 'TOTAL'.
         05  FILLER           PIC X(06) VALUE SPACES.
         05  FILLER           PIC X(08) VALUE '1ST ZONE'.
         05  FILLER           PIC X(05) VALUE SPACES.
         05  FILLER           PIC X(08) VALUE '2ND ZONE'.
         05  FILLER           PIC X(05) VALUE SPACES.
         05  FILLER           PIC X(08) VALUE '3RD ZONE'.
         05  FILLER           PIC X(05) VALUE SPACES.
         05  FILLER           PIC X(08) VALUE '4TH ZONE'.
         05  FILLER           PIC X(05) VALUE SPACES.
         05  FILLER           PIC X(08) VALUE '5TH ZONE'.
         05  FILLER           PIC X(05) VALUE SPACES.
         05  FILLER           PIC X(08) VALUE '6TH ZONE'.
         05  FILLER           PIC X(08) VALUE SPACES.
     01  DATA-LINE-11.
         05  FILLER           PIC X(23) VALUE SPACES.
         05  FILLER           PIC X(10) VALUE 'TREATED   '.
         05  TREATED-VALUES OCCURS 7 TIMES PIC -(9).---.
         05  FILLER           PIC X(08) VALUE SPACES.
     01  DATA-LINE-12.
         05  FILLER           PIC X(23) VALUE SPACES.
         05  FILLER           PIC X(10) VALUE 'BILLED    '.
         05  BILLED-VALUES OCCURS 7 TIMES PIC -(9).---.
         05  FILLER           PIC X(08) VALUE SPACES.
     01  DATA-LINE-13.
         05  FILLER           PIC X(23) VALUE SPACES.
         05  FILLER           PIC X(10) VALUE 'YTD BILLED'.
         05  YTD-BILLED-VALUES OCCURS 7 TIMES PIC -(9).---.
         05  FILLER           PIC X(08) VALUE SPACES.
     PROCEDURE DIVISION.
     OPEN-FILES.
         OPEN INPUT CARD-IN, DATE-TITLE-FILE,
             OUTPUT PRINT-OUT.
     HOUSE-KEEP.
         MOVE ZEROS TO YTD-VALUES-HOLD.
     TEST-FOR-NEW-FILE.
         PERFORM READ-INPUT-REC.
         IF CARD-SEQUENCE = 0
             GO TO REWIND-FILE.
         PERFORM READ-IN-DATE-TITLE-FILE THRU REWIND-FILE.
         GO TO CHECK-CARD-SEQUENCE.
     READ-IN-DATE-TITLE-FILE.
         READ DATE-TITLE-FILE AT END
             GO TO REWIND-FILE.
         MOVE YTD-WATER TO YTD-VALUES-HOLD.
```

```
  REWIND-FILE.
      CLOSE   DATE-TITLE-FILE.
      OPEN OUTPUT DATE-TITLE-FILE.
  READ-INPUT-REC.
      READ CARD-IN AT END
          GO TO START-PROCESSING.
  CHECK-CARD-SEQUENCE.
      IF CARD-SEQUENCE > 4
          GO TO START-PROCESSING.
      IF CARD-SEQUENCE NOT = INPUT-COUNT
          GO TO CARD-SEQUENCE-ERROR.
  PROCESS-FIRST-CARD.
      MOVE CURRENT-DATE-IN TO CURRENT-DATE-OUT, DATE-1.
      MOVE BEGINNING-DATE TO BEGINNING-DATE-OUT, DATE-3.
      MOVE REPORT-PERIOD-ALPHA TO REPORT-PERIOD-ALPHA-OUT,
          RPT-PERIOD-1.
      MOVE UTILITY-CODE TO UTILITY-CODE-OUT, UTIL-CODE.
      MOVE NO-OF-SUB-UTILITIES TO NO-OF-UTIL,
              NO-OF-UTILS-OUT, NO-OF-UTILS-HOLD.
      PERFORM ZERO-FILL-INPUT-CARD.
      MOVE CURRENT-MONTH TO CURRENT-MONTH-OUT, DATE-2.
      MOVE REPORT-PERIOD-NUMERIC TO REPORT-PERIOD-NUMERIC-OUT,
          RPT-PERIOD-2.
      MOVE CONVERSION-FACTOR TO CONVERSION-FACTOR-OUT, CONV-FACTOR.
      MULTIPLY 100.00 BY CONV-FACTOR GIVING FACTOR-OUT.
      MOVE NO-OF-ZONES TO NO-OF-ZONES-OUT, ZONES-OUT.
      MOVE TYPE-OF-SYSTEM TO TYPE-OF-SYSTEM-OUT, SYSTEM-OUT.
      ADD 1 TO INPUT-COUNT.
  PROCESS-SECOND-CARD.
      PERFORM READ-INPUT-REC THRU CHECK-CARD-SEQUENCE.
      MOVE TITLE-1 TO TITLE-1-OUT, TITLE-OUT OF TITLES-OUT (1).
      MOVE TITLE-2 TO TITLE-2-OUT, TITLE-OUT OF TITLES-OUT (2).
      ADD 1 TO INPUT-COUNT.
  PROCESS-THIRD-CARD.
      PERFORM READ-INPUT-REC THRU CHECK-CARD-SEQUENCE.
      PERFORM ZERO-FILL-INPUT-CARD.
      MOVE THIRD-AND-FOURTH-CARD TO WATER-FLOW-HOLD.
      ADD 1 TO INPUT-COUNT.
  PROCESS-FOURTH-CARD.
*****
*     IF THERE IS A FOURTH CARD THEN IT WILL OVER-RIDE
*     THE YTD VALUES IN THE DATE-TITLE-DATA-BASE FILE
*****
      PERFORM READ-INPUT-REC THRU CHECK-CARD-SEQUENCE.
*****
*     OVER-RIDE CARD WAS FOUND.
*****
      PERFORM ZERO-FILL-INPUT-CARD.
      MOVE THIRD-AND-FOURTH-CARD TO YTD-VALUES-HOLD.
      IF NO-OF-UTILS-HOLD > 0
```

```
          PERFORM READ-INPUT-REC.
 START-PROCESSING.
     PERFORM COMPUTE-WATER-FLOW VARYING I FROM 1
          BY 1 UNTIL I > 7.
     MOVE WATER-FLOW-HOLD TO TREATED-WATER.
     MOVE YTD-VALUES-HOLD TO YTD-WATER.
 WRITE-DISK-RECORD.
     WRITE OUTPUT-REC.
     MOVE SPACES TO OUTPUT-REC.
 WRITE-DATA-LINES.
     PERFORM MOVE-SPACES.
     WRITE PRINT-LINE BEFORE NEW-PAGE.
     MOVE HEADING-1 TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
     PERFORM SKIP-LINE.
     MOVE HEADING-2 TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
     PERFORM SKIP-LINE 4 TIMES.
     MOVE DATA-LINE-1  TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
     PERFORM SKIP-LINE.
     IF NO-OF-UTILS-HOLD > 0
         PERFORM PRINT-SUB-UTILITIES THRU
                   PRINT-SUB-UTILITIES-END.
     PERFORM SKIP-LINE 4 TIMES.
     MOVE DATA-LINE-2  TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
     PERFORM SKIP-LINE.
     MOVE DATA-LINE-3  TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
     PERFORM SKIP-LINE.
     MOVE DATA-LINE-4  TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
     PERFORM SKIP-LINE 4 TIMES.
     MOVE DATA-LINE-5  TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
     PERFORM SKIP-LINE 4 TIMES.
     MOVE DATA-LINE-6  TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
     PERFORM SKIP-LINE 4 TIMES.
     MOVE DATA-LINE-7  TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
     PERFORM SKIP-LINE 4 TIMES.
     MOVE DATA-LINE-8  TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
     PERFORM SKIP-LINE.
     MOVE DATA-LINE-9  TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
     PERFORM SKIP-LINE 4 TIMES.
     MOVE DATA-LINE-10 TO PRINT-DATA.
```

```
    PERFORM PRINT-LINE-OUT.
    PERFORM SKIP-LINE.
    MOVE DATA-LINE-11 TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    PERFORM SKIP-LINE.
    MOVE DATA-LINE-12 TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    PERFORM SKIP-LINE.
    MOVE DATA-LINE-13 TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    PERFORM SKIP-LINE 2 TIMES.
    GO TO CLOSE-FILES.
SKIP-LINE.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
MOVE-SPACES.
    MOVE SPACES TO PRINT-LINE.
PRINT-LINE-OUT.
    WRITE PRINT-LINE BEFORE 1.
COMPUTE-WATER-FLOW.
    MULTIPLY VALUES-1-HOLD (I) BY CONV-FACTOR
            GIVING BILLED-MG (I).
    ADD BILLED-MG (I) TO VALUES-HOLD (I).
    MOVE VALUES-1-HOLD (I) TO TREATED-VALUES (I).
    MOVE BILLED-MG (I) TO BILLED-VALUES (I).
    MOVE VALUES-HOLD (I) TO YTD-BILLED-VALUES (I).
PRINT-SUB-UTILITIES.
    MOVE SPACES TO NAME-1, NAME-2.
    MOVE ZEROS TO NO-OF-UTIL.
    MOVE 'SUB UTILITY' TO UTIL-CATEGORY.
    MOVE TITLE-1 TO TITLE-1-OUT, TITLE-OUT OF TITLES-OUT (1).
    MOVE TITLE-2 TO TITLE-2-OUT, TITLE-OUT OF TITLES-OUT (2).
    MOVE UTILITY-CODE-1 TO UTILITY-CODE-OUT, UTIL-CODE.
    MOVE DATA-LINE-1 TO PRINT-DATA
    PERFORM PRINT-LINE-OUT.
    PERFORM SKIP-LINE.
    PERFORM WRITE-DISK-RECORD.
    SUBTRACT 1 FROM NO-OF-UTILS-HOLD.
    IF NO-OF-UTILS-HOLD = 0
        GO TO PRINT-SUB-UTILITIES-END.
    PERFORM READ-INPUT-REC.
    GO TO PRINT-SUB-UTILITIES.
PRINT-SUB-UTILITIES-END.
    EXIT.
ZERO-FILL-INPUT-CARD.
    EXAMINE INPUT-REC REPLACING ALL ' ' BY '0'.
CARD-SEQUENCE-ERROR.
    MOVE ' INPUT CARDS OUT OF SEQUENCE OR BAD NUMERIC DATA '
    TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    MOVE INPUT-REC TO PRINT-DATA.
```

```
               PERFORM PRINT-LINE-OUT.
           CLOSE-FILES.
               CLOSE   CARD-IN, PRINT-OUT, DATE-TITLE-FILE.
           STOP-RUN.
               STOP RUN.
/*
//
/*EOF
```

```
//       PGMNAME=FAMSTBAR
       IDENTIFICATION DIVISION.
           PROGRAM-ID. FAMSTBAR.
       AUTHOR. ACT SYSTEMS, INC
                 SUITE 200
                 807 W MORSE BLVD
                 WINTER PARK, FL 32789.
       DATE-WRITTEN. MARCH 1979.
       REMARKS.    THIS PROGRAM READS THE INITIAL INPUT FILES
                   AND PRODUCES A TRIAL BALANCE SHEET.
       ENVIRONMENT DIVISION.
       CONFIGURATION SECTION.
       SOURCE-COMPUTER. IBM-370-168.
       OBJECT-COMPUTER. IBM-370-168.
       SPECIAL-NAMES.
           C01 IS NEW-PAGE.
       INPUT-OUTPUT SECTION.
       FILE-CONTROL.
           SELECT FINANCIAL-ACCT-TABFI
               ASSIGN TO DA-3330-I-FATABFI
               ACCESS MODE IS RANDOM
               NOMINAL KEY IS FA-NOMINAL
               RECORD KEY IS FA-NUMBER.
           SELECT PRINT-OUT
               ASSIGN TO UR-1403-S-PRINTOUT
               ACCESS MODE IS SEQUENTIAL.
           SELECT SORTED-FILE-CMF
               ASSIGN TO UT-3330-S-SORTCMF
               ACCESS MODE IS SEQUENTIAL.
           SELECT SORTED-FILE-INPUT
               ASSIGN TO UT-3330-S-SORTEDFI
               ACCESS MODE IS SEQUENTIAL.
           SELECT FINANCIAL-MERGED-FILE
               ASSIGN TO UT-3330-S-FAMGFILE
               ACCESS MODE IS SEQUENTIAL.
           SELECT SPECIAL-ACCT-TABFI
               ASSIGN TO UT-3330-S-SATABFI
               ACCESS MODE IS SEQUENTIAL.
           SELECT DATE-TITLE-FILE
               ASSIGN TO UT-3330-S-DATEFILE
               ACCESS MODE IS SEQUENTIAL.
       DATA DIVISION.
       FILE SECTION.
       FD  FINANCIAL-ACCT-TABFI
           BLOCK CONTAINS 8 RECORDS
           RECORD CONTAINS 58 CHARACTERS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS FA-REC.
       01  FA-REC.
           05  FA-NUMBER          PIC X(10).
           05  FA-NAME             PIC X(20) OCCURS 2 TIMES.
           05  FUND-NO             PIC XX.
           05  ACCT-TYPE           PIC XX.
           05  FRS-MATCH           PIC X(4).
       FD  SPECIAL-ACCT-TABFI
           BLOCK CONTAINS 0 RECORDS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS SPEC-ACCT-REC.
       01  SPEC-ACCT-REC.
           05  RECORD-COUNT.
               10  NO-OF-RECS    PIC 9(4).
               10  FILLER        PIC X(18).
           05  SPEC-ACCT OCCURS 1 TO 99 TIMES
               DEPENDING ON NO-OF-RECS
               ASCENDING KEY IS SA-NO INDEXED BY IA.
               10  SA-NO         PIC XX.
               10  SA-NAME       PIC X(20).
       FD  FINANCIAL-MERGED-FILE
           BLOCK CONTAINS 5 RECORDS
           RECORD CONTAINS 100 CHARACTERS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS OUTPUT-REC.
       01  OUTPUT-REC.
           05  ACCOUNT-OUT.
               10  FILLER        PIC X(8).
               10  FRS-UTIL-CODE PIC X.
               10  CAS-UTIL-CODE PIC X.
           05  FILLER            PIC X(4).
           05  FUND-NO-OUT       PIC XX.
           05  ACCT-TYPE-OUT     PIC XX.
           05  FILLER            PIC XX.
           05  AMOUNT-OUT        PIC S9(8)V99.
           05  FILLER            PIC X(70).
       FD  DATE-TITLE-FILE
           RECORD CONTAINS 316 CHARACTERS
           BLOCK CONTAINS 2 RECORDS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS DATE-TITLE-REC.
       01  DATE-TITLE-REC.
           05  DATE-IN             PIC X(18).
           05  CURRENT-MONTH       PIC 99.
           05  BEGINNING-DATE      PIC X(18).
           05  REPORT-PERIOD-ALPHA         PIC X(7).
           05  REPORT-PERIOD-NUMERIC       PIC 99.
           05  CONVERSION-FACTOR           PIC V999.
           05  NO-OF-ZONES         PIC 99.
           05  TYPE-OF-SYSTEM      PIC 99.
           05  UTIL-CODE.
               10  UTILITY-CODE PIC X.
               10  UTILITY-CODE-1 PIC X.
           05  NO-OF-UTILS        PIC 99.
           05  FIRST-TITLE        PIC X(24).
           05  SECOND-TITLE       PIC X(24).
           05  TREATED-WATER.
               10  TREATED-MG     PIC 9(7)V999 OCCURS 7 TIMES.
           05  BILLED-WATER.
               10  BILLED-MG      PIC 9(7)V999 OCCURS 7 TIMES.
           05  YTD-WATER.
               10  YTD-MG         PIC 9(7)V999 OCCURS 7 TIMES.
       FD  PRINT-OUT
           RECORD CONTAINS 133 CHARACTERS
           LABEL RECORDS ARE OMITTED
           DATA RECORD IS PRINT-LINE.
       01  PRINT-LINE.
           05  PRINT-DATA         PIC X(132).
           05  FILLER             PIC X.
       FD  SORTED-FILE-CMF
           RECORD CONTAINS 80 CHARACTERS
           BLOCK CONTAINS 5 RECORDS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS SORT-INPUT-CMF-REC.
       01  SORT-INPUT-CMF-REC.
           05  FILLER             PIC X(4).
           05  ACCT-CMF.
               10  FILLER         PIC X(8).
               10  FRS-UTILITY-CODE PIC X.
               10  CAS-UTILITY-CODE PIC X.
           05  CMF-FUND-NO        PIC XX.
           05  CMF-ACCT-TYPE      PIC XX.
           05  FILLER             PIC X(22).
           05  CMF-VALUE-YTD      PIC S9(8)V99.
           05  FILLER             PIC X(30).
       FD  SORTED-FILE-INPUT
           BLOCK CONTAINS 5 RECORDS
           RECORD CONTAINS 100 CHARACTERS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS SORT-INPUT-REC.
       01  SORT-INPUT-REC.
           05  INPUT-ACCT-NO.
               10  DATE-TITLE-CODE PIC X.
               10  FILLER          PIC X(9).
           05  FILLER             PIC X(4).
           05  INPUT-FUND-NO      PIC XX.
           05  INPUT-ACCT-TYPE    PIC XX.
           05  FILLER             PIC XX.
           05  INPUT-AMOUNT       PIC S9(8)V99.
           05  FILLER             PIC X(70).
      ******************************************************************
      *
      *
```

```
*    SORTED-FILE-INPUT IS A TEMP SORTED-MERGED FILE BY ACCOUNT #
*
*    OF ALL INTERFACE EDIT FILES.
*
**************************************************************
*
*    SORTED BY THE FOLLOWING FIELDS.
*            FRS UTIL CODE
*            FUND NO
*            ACCT TYPE
*            ACCOUNT NUMBER
*
**************************************************************
 WORKING-STORAGE SECTION.
 77  FA-NOMINAL              PIC X(10).
 77  PAGE-NO                 PIC 9(4)  VALUE 0.
 77  LINE-CT                 PIC 99    VALUE 0.
 77  MAX-LINE                PIC 99    VALUE 56.
 77  ACCT-HOLD               PIC X(10) VALUE SPACES.
 77  ACCUM-HOLD              PIC S9(8)V99 VALUE +0.
 77  INPUT-END-FLAG          PIC 9 VALUE 0.
 77  INPUT-BUFFER-FLAG       PIC 9 VALUE 0.
 77  UTILITY-CODE-HOLD       PIC X VALUE 'I'.
 77  FUND-NO-HOLD            PIC XX VALUE '00'.
 77  ACCT-TYPE-HOLD          PIC XX VALUE '00'.
 77  ACCT-TYPE-NAME-HOLD     PIC X(20).
 77  PRINT-DESC-TITLE        PIC X VALUE '1'.
 77  POSITIVE-1              PIC 99 VALUE 1.
 77  I                       PIC 9.
 77  J                       PIC 9.
 77  TITLE-1-HOLD            PIC X(24) VALUE SPACES.
 77  TITLE-2-HOLD            PIC X(24) VALUE SPACES.
 01  VALUES-HOLD.
     05  VALS-HOLD           PIC S9(8)V99 OCCURS 3 TIMES.
 01  TOTALS-HOLD.
     05  SUB-TOTALS          PIC S9(8)V99 OCCURS 3 TIMES.
     05  FUND-TOTALS         PIC S9(8)V99 OCCURS 3 TIMES.
     05  TOTALS              PIC S9(8)V99 OCCURS 3 TIMES.
 01  TITLE-LINE-1.
     05  FILLER              PIC X(54) VALUE SPACES.
     05  TITLE-OUT           PIC X(24).
     05  FILLER              PIC X(54) VALUE SPACES.
 01  TITLE-LINE-2.
     05  FILLER              PIC X(54) VALUE SPACES.
     05  TITLE-OUT-2         PIC X(24) VALUE SPACES.
     05  FILLER              PIC X(54) VALUE SPACES.
 01  TITLE-LINE-3.
     05  FILLER              PIC X(56) VALUE SPACES.
     05  FILLER              PIC X(19) VALUE 'TRIAL BALANCE SHEET'.
     05  FILLER              PIC X(46) VALUE SPACES.
```

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        05  FILLER              PIC X(6)  VALUE 'PAGE: '.
        05  PAGE-OUT            PIC Z(4).
        05  FILLER              PIC X     VALUE SPACES.
    01  TITLE-LINE-4.
        05  FILLER              PIC X(55) VALUE SPACES.
        05  FILLER              PIC X(21) VALUE 'FOR THE PERIOD ENDING'.
        05  FILLER              PIC X(56) VALUE SPACES.
    01  TITLE-LINE-5.
        05  FILLER              PIC X(57) VALUE SPACES.
        05  DATE-OUT            PIC X(18) VALUE SPACES.
        05  FILLER              PIC X(57) VALUE SPACES.
    01  HEADING-1.
        05  FUND-NAME-OUT       PIC X(20) VALUE SPACES.
        05  FILLER              PIC X VALUE SPACES.
        05  FILLER              PIC X(11) VALUE 'ACCOUNT NO.'.
        05  FILLER              PIC X(3)  VALUE SPACES.
        05  FILLER              PIC X(19) VALUE 'ACCOUNT DESCRIPTION'.
        05  FILLER              PIC X(13) VALUE SPACES.
        05  FILLER              PIC X(09) VALUE 'BEGINNING'.
        05  FILLER              PIC X(14) VALUE SPACES.
        05  FILLER              PIC X(07) VALUE 'CURRENT'.
        05  FILLER              PIC X(16) VALUE SPACES.
        05  FILLER              PIC X(06) VALUE 'ENDING'.
        05  FILLER              PIC X(13) VALUE SPACES.
    01  DATA-LINE.
        05  FILLER              PIC X(22).
        05  ACCT-OUT            PIC X(10).
        05  FILLER              PIC XX.
        05  DESC-OUT            PIC X(20).
        05  VALUES-OUT          OCCURS 3 TIMES.
            10  FILLER          PIC X(10).
            10  VAL-OUT         PIC -(9).--.
        05  FILLER              PIC X(12).
    01  DATA-LINE-1.
        05  FILLER              PIC X(15).
        05  DESC-OUT-1.
            10  DESC-OUT-2      PIC X(6).
            10  DESC-OUT-3      PIC X(24).
        05  FILLER              PIC X(87).
PROCEDURE DIVISION.
OPEN-FILES.
    OPEN    INPUT SORTED-FILE-INPUT, SPECIAL-ACCT-TABFI,
            DATE-TITLE-FILE,
    OUTPUT  PRINT-OUT, FINANCIAL-MERGED-FILE.
READ-IN-TABLE-FILE.
    READ SPECIAL-ACCT-TABFI AT END
        MOVE 'NO SPECIAL ACCT TABLE FOUND' TO PRINT-DATA
        PERFORM PRINT-LINE-OUT
        GO TO CLOSE-FILES.
READ-DATE-TITLE-FILE.
```

```
           READ DATE-TITLE-FILE AT END
               MOVE 'NO DATE-TITLE FILE FOUND' TO PRINT-DATA
               PERFORM PRINT-LINE-OUT
               GO TO CLOSE-FILES.
       SAVE-TITLES.
           MOVE FIRST-TITLE TO TITLE-1-HOLD.
           MOVE SECOND-TITLE TO TITLE-2-HOLD.
           MOVE DATE-IN TO DATE-OUT.
           PERFORM READ-DATE-TITLE-FILE.
           MOVE FIRST-TITLE TO TITLE-OUT.
           MOVE SECOND-TITLE TO TITLE-OUT-2.
       READ-INPUT-BY-ACCT.
           READ SORTED-FILE-INPUT AT END
               PERFORM WRITE-INPUT-ACCUM-REC
               GO TO REWIND-FILES.
           IF DATE-TITLE-CODE = SPACES
               GO TO READ-INPUT-BY-ACCT.
           IF (INPUT-ACCT-NO = '250   ' OR '250      C')
               GO TO READ-INPUT-BY-ACCT.
           IF (INPUT-FUND-NO = SPACES) OR
               (INPUT-ACCT-TYPE = SPACES)
               GO TO READ-INPUT-BY-ACCT.
           IF ACCT-HOLD = SPACES
               MOVE INPUT-ACCT-NO TO ACCT-HOLD
               MOVE INPUT-FUND-NO TO FUND-NO-HOLD
               MOVE INPUT-ACCT-TYPE TO ACCT-TYPE-HOLD.
           IF (ACCT-HOLD NOT = INPUT-ACCT-NO)
                   PERFORM WRITE-INPUT-ACCUM-REC.
           ADD INPUT-AMOUNT TO ACCUM-HOLD.
           GO TO READ-INPUT-BY-ACCT.
       REWIND-FILES.
           CLOSE   FINANCIAL-MERGED-FILE,
                   SORTED-FILE-INPUT.
           OPEN INPUT FINANCIAL-MERGED-FILE, SORTED-FILE-CMF,
                   FINANCIAL-ACCT-TABFI.
      *
      *
      *
      *          THE FOLLOWING IS FOR TESTING ONLY
      *
      *
      *
      *    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT 20 TIMES.
      *TEST-CMF-FILE.
      *    READ SORTED-FILE-CMF AT END
      *        GO TO CLOSE-FILES.
      *    MOVE SORT-INPUT-CMF-REC TO PRINT-LINE.
      *    PERFORM PRINT-LINE-OUT.
      *    GO TO TEST-CMF-FILE.
      *
      *
      *
      *
       INITIAL-HOLD-BUFFERS.
           MOVE '01' TO FUND-NO-HOLD.
           MOVE SPACES TO ACCT-TYPE-HOLD.
       ZERO-OUT-TOTALS-HOLD.
           MOVE ZEROS TO TOTALS-HOLD, VALUES-HOLD.
       GET-FUND-NAME.
           SET IA TO POSITIVE-1.
           SEARCH ALL SPEC-ACCT AT END
               MOVE SPACES TO FUND-NAME-OUT
           WHEN SA-NO OF SPEC-ACCT (IA) = FUND-NO-HOLD
               MOVE SA-NAME (IA) TO FUND-NAME-OUT.
       PRINT-HEADINGS.
           ADD 1 TO PAGE-NO.
           MOVE PAGE-NO TO PAGE-OUT.
           MOVE ZERO TO LINE-CT.
           MOVE SPACES TO PRINT-LINE.
           WRITE PRINT-LINE BEFORE NEW-PAGE.
           MOVE TITLE-LINE-1 TO PRINT-DATA.
           PERFORM PRINT-LINE-OUT.
           MOVE TITLE-LINE-2 TO PRINT-DATA.
           PERFORM PRINT-LINE-OUT.
           MOVE TITLE-LINE-3 TO PRINT-DATA.
           PERFORM PRINT-LINE-OUT.
           MOVE TITLE-LINE-4 TO PRINT-DATA.
           PERFORM PRINT-LINE-OUT.
           MOVE TITLE-LINE-5 TO PRINT-DATA.
           PERFORM PRINT-LINE-OUT.
           PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
           PERFORM PRINT-LINE-OUT.
           MOVE HEADING-1 TO PRINT-DATA.
           PERFORM PRINT-LINE-OUT.
           PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
           MOVE SPACES TO DATA-LINE.
           PERFORM PRINT-LINE-OUT.
       GET-UTILITY-CODE.
           PERFORM READ-CMF-ACCUM-FILE THRU CHECK-ACCTS-FUNDS.
           GO TO READ-INPUT-ACCUM-FILE.
       READ-CMF-ACCUM-FILE.
           MOVE ZEROS TO VALUES-HOLD.
           READ SORTED-FILE-CMF AT END
               PERFORM SUBTOTAL-FUND-BALANCE
               PERFORM WRITE-BALANCE-LOOP
               GO TO CLOSE-FILES.
       CHECK-ACCTS-FUNDS.
           IF (FUND-NO-HOLD NOT = CMF-FUND-NO) AND
               (CMF-FUND-NO NOT = '01')
                   PERFORM SUBTOTAL-FUND-BALANCE.
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    IF (FUND-NO-HOLD NOT = CMF-FUND-NO) AND
        (FRS-UTILITY-CODE = UTILITY-CODE-HOLD)
        MOVE CMF-FUND-NO TO FUND-NO-HOLD
        PERFORM GET-FUND-NAME THRU PRINT-HEADINGS.
    IF (CMF-FUND-NO = '02') AND (ACCT-TYPE-HOLD = SPACES)
        MOVE CMF-ACCT-TYPE TO ACCT-TYPE-HOLD.
    IF (CMF-FUND-NO = '02') AND
        (ACCT-TYPE-HOLD NOT = CMF-ACCT-TYPE)
            PERFORM SUBTOTAL-ACCT-TYPE.
    IF (CMF-FUND-NO = '02') AND (PRINT-DESC-TITLE NOT = SPACES)
        MOVE CMF-ACCT-TYPE TO ACCT-TYPE-HOLD
        PERFORM SEARCH-ACCT-TYPE-NAME
        PERFORM MOVE-SPACES THRU PRINT-LINE-OUT
        PERFORM PRINT-LINE-OUT
        MOVE SPACES TO DATA-LINE, DATA-LINE-1
        MOVE ACCT-TYPE-NAME-HOLD TO DESC-OUT-1
        MOVE DATA-LINE-1 TO DATA-LINE
        MOVE DATA-LINE TO PRINT-DATA
        PERFORM PRINT-LINE-OUT
        PERFORM MOVE-SPACES THRU PRINT-LINE-OUT
        MOVE SPACES TO PRINT-DESC-TITLE,
            DATA-LINE, DATA-LINE-1.
    MOVE ACCT-CMF TO ACCT-HOLD, ACCT-OUT, FA-NOMINAL.
    READ FINANCIAL-ACCT-TABFI
        INVALID KEY MOVE '** INVALID ACCT # ' TO FA-NAME (1),
            FA-NAME (2).
    MOVE FA-NAME (1) TO DESC-OUT.
    MOVE CMF-VALUE-YTD TO VALS-HOLD (1), VALS-HOLD (3).
READ-INPUT-ACCUM-FILE.
    IF INPUT-END-FLAG > 0
        GO TO MOVE-OUT-VALUES.
    IF INPUT-BUFFER-FLAG > 0
        GO TO COMPARE-ACCOUNT-NOS.
    PERFORM READ-MERGED-FILE.
    IF INPUT-END-FLAG > 0
        GO TO MOVE-OUT-VALUES.
    MOVE 1 TO INPUT-BUFFER-FLAG.
COMPARE-ACCOUNT-NOS.
    IF FRS-UTILITY-CODE NOT = UTILITY-CODE-HOLD
        PERFORM SUBTOTAL-FUND-BALANCE
        PERFORM WRITE-BALANCE-LOOP
        PERFORM ZERO-OUT-TOTALS-HOLD
        MOVE 1 TO INPUT-BUFFER-FLAG
        MOVE SPACES TO UTILITY-CODE-HOLD
        PERFORM POSITION-DISK-FILES
        MOVE CMF-FUND-NO TO FUND-NO-HOLD
        MOVE 0 TO PAGE-NO
        MOVE TITLE-1-HOLD TO TITLE-OUT
        MOVE TITLE-2-HOLD TO TITLE-OUT-2
        PERFORM GET-FUND-NAME THRU PRINT-HEADINGS
        GO TO CHECK-ACCTS-FUNDS.
CHECK-DISK-POSITIONS.
    IF ACCT-HOLD = ACCOUNT-OUT
        MOVE AMOUNT-OUT TO VALS-HOLD (2)
        ADD AMOUNT-OUT TO VALS-HOLD (3)
        MOVE 0 TO INPUT-BUFFER-FLAG
        GO TO MOVE-OUT-VALUES.
    IF ACCOUNT-OUT > ACCT-HOLD
        MOVE 1 TO INPUT-BUFFER-FLAG
        GO TO MOVE-OUT-VALUES.
    IF ACCOUNT-OUT < ACCT-HOLD
        PERFORM READ-MERGED-FILE.
    IF INPUT-END-FLAG > 0
        GO TO MOVE-OUT-VALUES.
    GO TO CHECK-DISK-POSITIONS.
MOVE-OUT-VALUES.
    PERFORM MOVE-OUT-VALUE-ARRAY VARYING
        I FROM 1 BY 1 UNTIL I > 3.
    PERFORM PRINT-LINE-ACCTS.
    GO TO READ-CMF-ACCUM-FILE.
MOVE-OUT-VALUE-ARRAY.
    MOVE VALS-HOLD (I) TO VAL-OUT OF VALUES-OUT (I).
    ADD VALS-HOLD (I) TO SUB-TOTALS (I), FUND-TOTALS (I),
            TOTALS (I).
    IF FUND-NO-HOLD = '01'
        MOVE ZERO TO SUB-TOTALS (I).
PRINT-LINE-ACCTS.
    MOVE DATA-LINE TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    IF FA-NAME (2) NOT = SPACES
        MOVE SPACES TO DATA-LINE
        MOVE FA-NAME (2) TO DESC-OUT
        MOVE DATA-LINE TO PRINT-DATA
        PERFORM PRINT-LINE-OUT THRU PAGE-OVFLOW.
    PERFORM MOVE-SPACES THRU PAGE-OVFLOW.
    MOVE SPACES TO DATA-LINE.
WRITE-BALANCE-LOOP.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
    MOVE SPACES TO DATA-LINE, DATA-LINE-1.
    MOVE 'TOTAL TRIAL BALANCE' TO DESC-OUT-1.
    MOVE DATA-LINE-1 TO DATA-LINE.
    PERFORM MOVE-BALANCE-VALS-OUT VARYING
        J FROM 1 BY 1 UNTIL J > 3
    MOVE DATA-LINE TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    MOVE SPACES TO DATA-LINE.
MOVE-BALANCE-VALS-OUT.
    MOVE TOTALS (J) TO VAL-OUT OF VALUES-OUT (J).
    MOVE ZERO TO TOTALS (J).
INVALID-ACCT-NO.
```

```
           PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
           MOVE 'INVALID INPUT ACCT # ' TO DESC-OUT.
           MOVE DATA-LINE TO PRINT-DATA.
               PERFORM PRINT-LINE-OUT.
           PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
           PERFORM PRINT-LINE-OUT 2 TIMES.
       POSITION-DISK-FILES.
           CLOSE   SORTED-FILE-CMF,
                   FINANCIAL-MERGED-FILE.
           OPEN    INPUT SORTED-FILE-CMF
                   FINANCIAL-MERGED-FILE.
           PERFORM POSITION-CMF THRU POSITION-CMF-END.
           PERFORM POSITION-MERGED THRU POSITION-MERGED-END.
       POSITION-CMF.
           READ SORTED-FILE-CMF AT END
               MOVE 'MERGED FILE AT END' TO PRINT-DATA
               PERFORM PRINT-LINE-OUT
               GO TO CLOSE-FILES.
           IF FRS-UTILITY-CODE = UTILITY-CODE-HOLD
               GO TO POSITION-CMF-END
           ELSE GO TO POSITION-CMF.
       POSITION-CMF-END.
           EXIT.
       POSITION-MERGED.
           READ FINANCIAL-MERGED-FILE AT END
               MOVE 'CMF AT END        ' TO PRINT-DATA
               PERFORM PRINT-LINE-OUT
               GO TO CLOSE-FILES.
           IF FRS-UTIL-CODE = UTILITY-CODE-HOLD
               GO TO POSITION-MERGED-END
           ELSE GO TO POSITION-MERGED.
       POSITION-MERGED-END.
           EXIT.
       READ-MERGED-FILE.
           READ FINANCIAL-MERGED-FILE AT END
               MOVE 1 TO INPUT-END-FLAG.
       MOVE-SPACES.
           MOVE SPACES TO PRINT-LINE.
       PRINT-LINE-OUT.
           WRITE PRINT-LINE BEFORE 1.
           ADD 1 TO LINE-CT.
       PAGE-OVFLOW.
           IF LINE-CT > MAX-LINE
               PERFORM PRINT-HEADINGS.
       WRITE-INPUT-ACCUM-REC.
           MOVE ACCT-HOLD TO ACCOUNT-OUT.
           MOVE FUND-NO-HOLD TO FUND-NO-OUT.
           MOVE ACCT-TYPE-HOLD TO ACCT-TYPE-OUT.
           MOVE ACCUM-HOLD TO AMOUNT-OUT.
      *
```

```
*
*
*
*          THE FOLLOWING IS FOR TESTING ONLY
*
*
*    MOVE OUTPUT-REC TO PRINT-LINE.
*    PERFORM PRINT-LINE-OUT.
*
*
*
*
*
*
     WRITE OUTPUT-REC.
     MOVE ZERO TO ACCUM-HOLD.
     MOVE INPUT-ACCT-NO TO ACCT-HOLD.
     MOVE INPUT-FUND-NO TO FUND-NO-HOLD.
     MOVE INPUT-ACCT-TYPE TO ACCT-TYPE-HOLD.
 SEARCH-ACCT-TYPE-NAME.
     SET IA TO POSITIVE-1.
     SEARCH ALL SPEC-ACCT AT END
         MOVE SPACES TO ACCT-TYPE-NAME-HOLD
     WHEN SA-NO OF SPEC-ACCT (IA) = ACCT-TYPE-HOLD
         MOVE SA-NAME (IA) TO ACCT-TYPE-NAME-HOLD.
 SUBTOTAL-ACCT-TYPE.
     PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
     MOVE SPACES TO DATA-LINE, DATA-LINE-1.
     MOVE 'TOTAL' TO DESC-OUT-2.
     MOVE ACCT-TYPE-NAME-HOLD TO DESC-OUT-3.
     MOVE DATA-LINE-1 TO DATA-LINE.
     PERFORM MOVE-OUT-SUB-TOTALS VARYING I
         FROM 1 BY 1 UNTIL I > 3.
     MOVE DATA-LINE TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
     PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
     PERFORM PRINT-LINE-OUT 2 TIMES.
     MOVE SPACES TO DATA-LINE.
     MOVE CMF-ACCT-TYPE TO ACCT-TYPE-HOLD.
     MOVE '1' TO PRINT-DESC-TITLE.
     PERFORM PAGE-OVFLOW.
 MOVE-OUT-SUB-TOTALS.
     MOVE SUB-TOTALS (I) TO VAL-OUT OF VALUES-OUT (I).
     MOVE ZERO TO SUB-TOTALS (I).
 SUBTOTAL-FUND-BALANCE.
     IF FUND-NO-HOLD = '02'
         PERFORM SUBTOTAL-ACCT-TYPE.
     PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
     MOVE SPACES TO DATA-LINE, DATA-LINE-1.
     MOVE 'TOTAL' TO DESC-OUT-2.
```

```
           MOVE FUND-NAME-OUT TO DESC-OUT-3.
           MOVE DATA-LINE-1 TO DATA-LINE.
           PERFORM MOVE-OUT-FUND-TOTALS VARYING I
               FROM 1 BY 1 UNTIL I > 3.
           MOVE DATA-LINE TO PRINT-DATA.
           PERFORM PRINT-LINE-OUT.
           PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
           PERFORM PRINT-LINE-OUT 2 TIMES.
           MOVE SPACES TO DATA-LINE.
           PERFORM PAGE-OVFLOW.
       MOVE-OUT-FUND-TOTALS.
           MOVE FUND-TOTALS (I) TO VAL-OUT OF VALUES-OUT (I).
           MOVE ZERO TO FUND-TOTALS (I).
       CLOSE-FILES.
           CLOSE   FINANCIAL-MERGED-FILE, SORTED-FILE-CMF
               SPECIAL-ACCT-TABFI, DATE-TITLE-FILE,
               FINANCIAL-ACCT-TABFI, PRINT-OUT.
       STOP-RUN.
           STOP RUN.
/*
//
/*EOF
```

```
//          PGMNAME=FAMSUZFI
//COB.SYSIN    DD  *
       IDENTIFICATION DIVISION.
           PROGRAM-ID. FAMSUZFI.
       AUTHOR. ACT SYSTEMS, INC
               SUITE 200
               807 W MORSE BLVD
               WINTER PARK, FL 32789.
       DATE-WRITTEN. APR 1979.
       REMARKS.   THIS PROGRAM ZEROS OUT THE AMOUNT
                  FIELDS IN THE CROSS-MATRIX FILE
                  DEPENDING ON THE PARAMETER CARD(S).
       ENVIRONMENT DIVISION.
       CONFIGURATION SECTION.
       SOURCE-COMPUTER. IBM-370.
       OBJECT-COMPUTER. IBM-370.
       SPECIAL-NAMES.
           C01 IS NEW-PAGE.
       INPUT-OUTPUT SECTION.
       FILE-CONTROL.
           SELECT CARD-IN
               ASSIGN TO UR-2540R-S-CARDIN
               ACCESS MODE IS SEQUENTIAL.
           SELECT PRINT-OUT
               ASSIGN TO UR-1403-S-PRINTOUT
               ACCESS MODE IS SEQUENTIAL.
           SELECT CROSS-MATRIX-FILE
               ASSIGN TO DA-3330-I-FAMSFILE
               ACCESS MODE IS SEQUENTIAL
               RECORD KEY IS CM-NUMBER.
       DATA DIVISION.
       FILE SECTION.
       FD  CROSS-MATRIX-FILE
           RECORD CONTAINS 80 CHARACTERS
           BLOCK CONTAINS 5 RECORDS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS INPUT-REC.
       01  INPUT-REC.
           05  MATCH-CODE         PIC X(4).
           05  CM-NUMBER.
               10  FIRST-FOUR.
                   15  FIRST-THREE      PIC X(3).
                   15  FOURTH-ONE       PIC X.
               10  FILLER               PIC X(6).
           05  FILLER             PIC X(6).
           05  AMOUNTS.
               10  AMTS OCCURS 6 TIMES PIC S9(8)V99.
      *****
      *      THE ABOVE AMTS (AMOUNTS) ARE AS FOLLOWS
      *        (1) -- CURRENT COST AMOUNT
*        (2) -- PREVIOUS MONTH COST AMOUNT
*        (3) -- CURRENT COST AMOUNT YEAR TO DATE (YTD)
*        (4) -- BUDGET AMOUNT
*        (5) -- PREVIOUS YEAR COST AMOUNT (PYC)
*        (6) NOT USED
*****
 FD  CARD-IN
     RECORD CONTAINS 80 CHARACTERS
     LABEL RECORDS ARE OMITTED
     DATA RECORD IS INPUT-CARD.
 01  INPUT-CARD.
     05  PARM-CODE          PIC X.
     05  FILLER             PIC X(79).
 01  SPECIFIC-CARD-ZERO.
     05  ACCT-IN            PIC X(10).
     05  FILLER             PIC X(70).
 FD  PRINT-OUT
     RECORD CONTAINS 133 CHARACTERS
     LABEL RECORDS ARE OMITTED
     DATA RECORD IS PRINT-LINE.
 01  PRINT-LINE.
     05  FILLER             PIC X.
     05  PRINT-DATA         PIC X(80).
     05  COMMENT-OUT        PIC X(52).
 PROCEDURE DIVISION.
 OPEN-FILES.
     OPEN    I-O          CROSS-MATRIX-FILE,
             INPUT   CARD-IN,
             OUTPUT  PRINT-OUT.
 TOP-OF-NEWPAGE.
     PERFORM MOVE-SPACES.
     WRITE PRINT-LINE BEFORE NEW-PAGE.
     PERFORM PRINT-LINE-OUT 10 TIMES.
     MOVE 'THE COST MATRIX FILE IS BEING  CHANGED   BY THE FOLLOWI
-        'NG METHOD' TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
     PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
 READ-CARD-IN.
     READ CARD-IN AT END GO TO STANDARD-ZERO-PROCEDURE.
     IF PARM-CODE = 'S'
         GO TO SPECIFIC-ACCT-ZERO-PROCEDURE.
     IF PARM-CODE = 'F' THEN
         GO TO FISCAL-YEAR-CHANGE-PROCEDURE.
     IF PARM-CODE = 'Z' THEN
         GO TO ZERO-OUT-FILE-PROCEDURE.
 INVALID-PARM-CODE-FALLTHRU.
     MOVE '     THE FOLLOWING PARAMETER CARD WAS INVALID -- JOB ABO
-        'RTED' TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
     MOVE INPUT-CARD TO PRINT-DATA.
```

```
    PERFORM PRINT-LINE-OUT.
    GO TO CLOSE-FILES.
STANDARD-ZERO-PROCEDURE.
    MOVE '    NORMAL PERIOD CHANGE OVER' TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
START-ZERO-1.
    PERFORM READ-CM-FILE.
    MOVE AMTS (1) TO AMTS (2).
    MOVE ZEROS TO AMTS (1).
    PERFORM REWRITE-CM-FILE.
    GO TO START-ZERO-1.
FISCAL-YEAR-CHANGE-PROCEDURE.
    MOVE '     FISCAL YEAR CHANGE OVER '  TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
START-ZERO-2.
    PERFORM READ-CM-FILE.
    IF FIRST-THREE NOT < 600 OR > 999
        MOVE AMTS (3) TO AMTS (5)
        MOVE ZEROS TO AMTS (3).
    IF FIRST-FOUR EQUAL 1101 OR 1102
        MOVE AMTS (3) TO AMTS (5)
        MOVE ZEROS TO AMTS (3).
    PERFORM REWRITE-CM-FILE.
    GO TO START-ZERO-2.
ZERO-OUT-FILE-PROCEDURE.
    MOVE '     COST MATRIX FILE IS BEING ZEROED OUT' TO
        PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
START-ZERO-3.
    PERFORM READ-CM-FILE.
    MOVE ZEROS TO AMOUNTS.
    PERFORM REWRITE-CM-FILE.
    GO TO START-ZERO-3.
SPECIFIC-ACCT-ZERO-PROCEDURE.
    READ CARD-IN AT END
        GO TO CLOSE-FILES.
TEST-CM-FILE.
    PERFORM READ-CM-FILE.
    IF CM-NUMBER NOT = ACCT-IN
        GO TO TEST-CM-FILE.
    MOVE AMTS (3) TO AMTS (5).
    MOVE ZEROS TO AMTS (3).
    PERFORM REWRITE-CM-FILE.
    GO TO SPECIFIC-ACCT-ZERO-PROCEDURE.
    MOVE INPUT-CARD TO PRINT-DATA.
    MOVE 'SPECIFIC RECORD ZERODED OUT' TO COMMENT-OUT.
    PERFORM PRINT-LINE-OUT.
    GO TO SPECIFIC-ACCT-ZERO-PROCEDURE.
READ-CM-FILE.
    READ CROSS-MATRIX-FILE AT END
```

```
                MOVE SPACES TO PRINT-LINE
                MOVE  'REVISION OF CM FILE COMPLETED' TO PRINT-DATA
                     PERFORM PRINT-LINE-OUT
                     GO TO CLOSE-FILES.
           REWRITE-CM-FILE.
                REWRITE INPUT-REC.
           MOVE-SPACES.
                MOVE SPACES TO PRINT-LINE.
           PRINT-LINE-OUT.
                WRITE PRINT-LINE BEFORE 1.
           CLOSE-FILES.
                CLOSE   CROSS-MATRIX-FILE,
                        CARD-IN,
                        PRINT-OUT.
           E-O-J.
                STOP RUN.
/*
//
/*EOF
```

```
//          PGMNAME=FAMSCUPD
//COB.SYSIN     DD  *
       IDENTIFICATION DIVISION.
       PROGRAM-ID. FAMSCUPD.
       AUTHOR. ACT SYSTEMS, INC
               SUITE 200
               807 W MORSE BLVD
               WINTER PARK, FL 32789.
       DATE-WRITTEN.  APR 1979.
       REMARK.       THIS PROGRAM READS THE  MERGED FILE CREATED
                     BY THE PROGRAM FAMSTBAR, USING THIS
                     DATA THE CROSS MATRIX FILE IS UPDATED.
       ENVIRONMENT DIVISION.
       CONFIGURATION SECTION.
       SOURCE-COMPUTER. IBM-370.
       SPECIAL-NAMES.
           C01 IS NEW-PAGE.
       INPUT-OUTPUT SECTION.
       FILE-CONTROL.
           SELECT FINANCIAL-MERGED-FILE
               ASSIGN TO UT-3330-S-FAMGFILE
               ACCESS MODE IS SEQUENTIAL.
           SELECT CROSS-MATRIX-FILE
               ASSIGN TO DA-3330-I-CMFILE
               ACCESS MODE IS RANDOM
               RECORD KEY IS CM-NUMBER
               NOMINAL KEY IS CM-NOMINAL.
           SELECT PRINT-OUT
               ASSIGN TO UR-1403-S-PRINTOUT
               ACCESS MODE IS SEQUENTIAL.
           SELECT DATE-TITLE-FILE
               ASSIGN TO UT-3330-S-DATEFILE
               ACCESS MODE IS SEQUENTIAL.
       DATA DIVISION.
       FILE SECTION.
       FD  CROSS-MATRIX-FILE
           BLOCK CONTAINS 5 RECORDS
           RECORD CONTAINS 80 CHARACTERS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS CM-REC.
       01  CM-REC.
           05  MATCH-CODE        PIC X(4).
           05  CM-NUMBER.
               10  ACCT-NO       PIC X(10).
           05  FILLER            PIC X(6).
           05  AMOUNTS.
               10  AMT OCCURS 6 TIMES PIC S9(8)V99.
      *****
      *      THE ABOVE AMTS (AMOUNTS) ARE AS FOLLOWS
      *         (1) -- CURRENT COST AMOUNT
*        (2) -- PREVIOUS MONTH COST AMOUNT
*        (3) -- CURRENT COST AMOUNT YEAR TO DATE (YTD)
*        (4) -- BUDGET AMOUNT
*        (5) -- PREVIOUS YEAR COST AMOUNT (PYC)
*        (6) NOT USED
*****
 FD  FINANCIAL-MERGED-FILE
     BLOCK CONTAINS 5 RECORDS
     RECORD CONTAINS 100 CHARACTERS
     LABEL RECORDS ARE STANDARD
     DATA RECORD IS INPUT-REC.
 01  INPUT-REC.
     05  ACCT-IN         PIC X(10).
     05  FILLER          PIC X(10).
     05  VALUE-IN        PIC S9(8)V99.
     05  FILLER          PIC X(70).
 FD  PRINT-OUT
     RECORD CONTAINS 133 CHARACTERS
     LABEL RECORDS ARE OMITTED
     DATA RECORD IS PRINT-LINE.
 01  PRINT-LINE.
     05  FILLER          PIC X.
     05  PRINT-DATA      PIC X(132).
 FD  DATE-TITLE-FILE
     RECORD CONTAINS 316 CHARACTERS
     BLOCK CONTAINS 2 RECORDS
     LABEL RECORDS ARE STANDARD
     DATA RECORD IS DATE-TITLE-REC.
 01  DATE-TITLE-REC.
     05  DATE-IN         PIC X(18).
     05  CURRENT-MONTH   PIC 99.
     05  BEGINNING-DATE  PIC X(18).
     05  REPORT-PERIOD-ALPHA    PIC X(7).
     05  REPORT-PERIOD-NUMERIC  PIC 99.
     05  CONVERSION-FACTOR      PIC V999.
     05  NO-OF-ZONES     PIC 99.
     05  TYPE-OF-SYSTEM  PIC 99.
     05  UTILITY-CODE    PIC XX.
     05  ABBV-UTIL-CODE  PIC XX.
     05  TITLE-1         PIC X(24).
     05  TITLE-2         PIC X(24).
     05  TREATED-WATER.
         10  TREATED-MG  PIC 9(7)V999 OCCURS 7 TIMES.
     05  BILLED-WATER.
         10  BILLED-MG   PIC 9(7)V999 OCCURS 7 TIMES.
     05  YTD-WATER.
         10  YTD-MG      PIC 9(7)V999 OCCURS 7 TIMES.
 WORKING-STORAGE SECTION.
 77  CM-NOMINAL          PIC X(16) VALUE SPACES.
 77  READ-COUNT          PIC 9(7)  VALUE ZERO.
```

```
77  UPDATE-COUNT             PIC 9(7) VALUE ZERO.
77  GOOD-COUNT               PIC 9(7) VALUE ZERO.
77  BAD-COUNT                PIC 9(7) VALUE ZERO.
01  AMOUNT-HOLD.
    05  AMT-HOLD OCCURS 6 TIMES PIC S9(8)V99.
01  DATA-LINE.
    05  FILLER               PIC X(10) VALUE SPACES.
    05  COMMENT              PIC X(18) VALUE SPACES.
    05  FILLER               PIC XX    VALUE SPACES.
    05  COUNT-OUT            PIC Z(7).
    05  ERROR-REC            PIC X(80).
    05  FILLER               PIC X(15).
PROCEDURE DIVISION.
OPEN-FILES.
    OPEN    INPUT            FINANCIAL-MERGED-FILE
                             DATE-TITLE-FILE
            I-O              CROSS-MATRIX-FILE
            OUTPUT           PRINT-OUT.
READ-DATE-TITLE-FILE.
    READ DATE-TITLE-FILE AT END
        MOVE 'NO DATE TITLE FILE' TO PRINT-DATA
        PERFORM PRINT-LINE-OUT
        GO TO CLOSE-FILES.
HOUSE-KEEP.
    MOVE SPACES TO DATA-LINE.
    MOVE ZEROS  TO AMOUNT-HOLD.
TOP-NEW-PAGE.
    PERFORM MOVE-SPACES.
    WRITE PRINT-LINE BEFORE NEW-PAGE.
    MOVE 'UPDATE CM FILE PGM' TO COMMENT.
    MOVE DATA-LINE TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES.
    PERFORM PRINT-LINE-OUT 3 TIMES.
READ-INPUT-REC.
    READ FINANCIAL-MERGED-FILE AT END
        GO TO WRITE-COUNTS.
    ADD 1 TO READ-COUNT.
MOVE-NOMINAL-KEY.
    MOVE ACCT-IN TO CM-NOMINAL.
    READ CROSS-MATRIX-FILE INVALID KEY
        MOVE 'INVALID RECORD KEY' TO COMMENT
        MOVE INPUT-REC TO ERROR-REC
        MOVE DATA-LINE TO PRINT-DATA
        PERFORM PRINT-LINE-OUT
        PERFORM MOVE-SPACES THRU PRINT-LINE-OUT
        MOVE SPACES TO DATA-LINE
        ADD 1 TO BAD-COUNT
        GO TO READ-INPUT-REC.
    MOVE AMOUNTS TO AMOUNT-HOLD.
```

```
               MOVE ZEROS TO AMT-HOLD (1).
           START-UPDATE.
               ADD VALUE-IN TO AMT-HOLD (1) AMT-HOLD (3).
               ADD 1 TO GOOD-COUNT.
           REWRITE-CM-REC.
               MOVE AMOUNT-HOLD TO AMOUNTS.
               REWRITE CM-REC.
               ADD 1 TO UPDATE-COUNT.
               MOVE SPACES TO CM-NUMBER.
               GO TO READ-INPUT-REC.
           MOVE-SPACES.
               MOVE SPACES TO PRINT-LINE.
           PRINT-LINE-OUT.
               WRITE PRINT-LINE BEFORE 1.
           WRITE-COUNTS.
               PERFORM MOVE-SPACES.
               PERFORM PRINT-LINE-OUT 3 TIMES.
               MOVE 'INPUT RECORD COUNT' TO COMMENT.
               MOVE READ-COUNT TO COUNT-OUT.
               PERFORM PRINT-LINE-OUT.
               MOVE 'ERROR RECORD COUNT' TO COMMENT.
               MOVE BAD-COUNT TO COUNT-OUT.
               PERFORM PRINT-LINE-OUT.
               MOVE 'GOOD  RECORD COUNT' TO COMMENT.
               MOVE GOOD-COUNT TO COUNT-OUT.
               PERFORM PRINT-LINE-OUT.
               MOVE 'UPDATED REC  COUNT' TO COMMENT.
               MOVE UPDATE-COUNT TO COUNT-OUT.
               PERFORM PRINT-LINE-OUT.
           CLOSE-FILES.
               CLOSE   CROSS-MATRIX-FILE,
                       FINANCIAL-MERGED-FILE
                       DATE-TITLE-FILE
                       PRINT-OUT.
           E-O-J.
               STOP RUN.
/*
//
/*EOF
```

```
//         PGMNAME=FAMSSORE
       IDENTIFICATION DIVISION.
       PROGRAM-ID. FAMSSORE.
       AUTHOR. ACT SYSTEMS, INC
               SUITE 200
               807 W MORSE BLVD
               WINTER PARK, FL 32789.
       DATE-WRITTEN. MARCH 1979.
       REMARKS.    THIS PROGRAM READS THE SORTED FILE OF THE
                   CROSS MATRIX FILE AND PRODUCES A STATEMENT OF
                   REVENUE AND EXPENSES.
       ENVIRONMENT DIVISION.
       CONFIGURATION SECTION.
       SOURCE-COMPUTER. IBM-370-168.
       OBJECT-COMPUTER. IBM-370-168.
       SPECIAL-NAMES.
           C01 IS NEW-PAGE.
       INPUT-OUTPUT SECTION.
       FILE-CONTROL.
           SELECT FINANCIAL-ACCT-TABFI
               ASSIGN TO DA-3330-I-FATABFI
               ACCESS MODE IS RANDOM
               NOMINAL KEY IS FA-NOMINAL
               RECORD KEY IS FA-NUMBER.
           SELECT PRINT-OUT
               ASSIGN TO UR-1403-S-PRINTOUT
               ACCESS MODE IS SEQUENTIAL.
           SELECT SORTED-FILE
               ASSIGN TO UT-3330-S-SORTEDFI
               ACCESS MODE IS SEQUENTIAL.
           SELECT DATE-TITLE-FILE
               ASSIGN TO UT-3330-S-DATEFILE
               ACCESS MODE IS SEQUENTIAL.
           SELECT FUND-BALANCE-FILE
               ASSIGN TO UT-3330-S-FUNDBAL
               ACCESS MODE IS SEQUENTIAL.
       DATA DIVISION.
       FILE SECTION.
       FD  FINANCIAL-ACCT-TABFI
           BLOCK CONTAINS 8 RECORDS
           RECORD CONTAINS 58 CHARACTERS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS FA-REC.
       01  FA-REC.
           05  FA-NUMBER          PIC X(10).
           05  FA-NAME            PIC X(20) OCCURS 2 TIMES.
           05  FUND-TYPE          PIC XX.
           05  ACCT-TYPE          PIC XX.
           05  FRS-MATCH          PIC X(4).
       FD  PRINT-OUT
```

```
           RECORD CONTAINS 133 CHARACTERS
           LABEL RECORDS ARE OMITTED
           DATA RECORD IS PRINT-LINE.
       01  PRINT-LINE.
           05  PRINT-DATA        PIC X(132).
           05  FILLER            PIC X.
       FD  DATE-TITLE-FILE
           RECORD CONTAINS 316 CHARACTERS
           BLOCK CONTAINS 2 RECORDS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS DATE-TITLE-REC.
       01  DATE-TITLE-REC.
           05  DATE-IN           PIC X(18).
           05  CURRENT-MONTH     PIC 99.
           05  BEGINNING-DATE    PIC X(18).
           05  REPORT-PERIOD-ALPHA       PIC X(7).
           05  REPORT-PERIOD-NUMERIC     PIC 99.
           05  CONVERSION-FACTOR         PIC V999.
           05  NO-OF-ZONES       PIC 99.
           05  TYPE-OF-SYSTEM    PIC 99.
           05  UTIL-CODE.
               10  UTILITY-CODE PIC X.
               10  UTILITY-CODE-1 PIC X.
           05  NO-OF-UTILS       PIC 99.
           05  FIRST-TITLE       PIC X(24).
           05  SECOND-TITLE      PIC X(24).
           05  TREATED-WATER.
               10  TREATED-MG    PIC 9(7)V999 OCCURS 7 TIMES.
           05  BILLED-WATER.
               10  BILLED-MG     PIC 9(7)V999 OCCURS 7 TIMES.
           05  YTD-WATER.
               10  YTD-MG        PIC 9(7)V999 OCCURS 7 TIMES.
       FD  SORTED-FILE
           RECORD CONTAINS 80 CHARACTERS
           BLOCK CONTAINS 5 RECORDS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS INPUT-REC.
       01  INPUT-REC.
           05  FRS-MATCH-CODE.
               10  FIRST-POS     PIC 9.
               10  SECOND-POS    PIC 9.
               10  FILLER        PIC 99.
           05  ACCT-NO.
               10  FILLER        PIC X(8).
               10  UTIL-CODE-IN.
                   15  SUB-UTIL-CODE    PIC X.
                   15  SUB-UTIL-CODE-1  PIC X.
           05  FUND-TYPE-IN      PIC X(2).
           05  ACCT-TYPE-IN      PIC X(2).
           05  FILLER            PIC XX.
           05  AMOUNTS              PIC S9(8)V99  OCCURS 6 TIMES.
      *****
      *        THE ABOVE AMTS (AMOUNTS) ARE AS FOLLOWS
      *           (1) -- CURRENT COST AMOUNT
      *           (2) -- PREVIOUS MONTH COST AMOUNT
      *           (3) -- CURRENT COST AMOUNT YEAR TO DATE (YTD)
      *           (4) -- BUDGET AMOUNT
      *           (5) -- PREVIOUS YEAR COST AMOUNT (PYC)
      *           (6) NOT USED
      *****
      *
      *     SORTED-FILE IS  THE CMF SORTED IN ASCENDING ORDER
      *
      *     BY MATCH CODE FROM 1XXX TO 5XXX.
      *
       FD  FUND-BALANCE-FILE
           RECORD CONTAINS 70 CHARACTERS
           BLOCK CONTAINS 5 RECORDS
               LABEL RECORDS ARE STANDARD
               DATA RECORD IS FUND-BAL-REC.
       01  FUND-BAL-REC              PIC X(70).
       WORKING-STORAGE SECTION.
       77  FA-NOMINAL                PIC X(10).
       77  PAGE-NO                   PIC 9(4)  VALUE 0.
       77  LINE-CT                   PIC 99    VALUE 0.
       77  MAX-LINE                  PIC 99    VALUE 54.
       77  DOLLAR-SIGN               PIC X     VALUE '$'.
       77  DOLLAR-SIGN-FLAG          PIC 9     VALUE 1.
       77  CURR-ACCUM                PIC S9(8)V99 VALUE +0.
       77  YTD-ACCUM                 PIC S9(8)V99 VALUE +0.
       77  BUDGET-ACCUM              PIC S9(8)V99 VALUE +0.
       77  ANNUAL-BUDGET-ACCUM       PIC S9(8)V99 VALUE +0.
       77  VARIANCE-ACCUM            PIC S9(8)V99 VALUE +0.
       77  POS-ZERO                  PIC S9(8)V99 VALUE +0.
       77  I                         PIC 99 VALUE 1.
       77  J                         PIC 99 VALUE 0.
       77  K                         PIC 99 VALUE 0.
       77  YEARLY-PERCENT            PIC 9V9999.
       77  TEMP-HOLD                 PIC S9(8)V99.
       77  MATCH-HOLD                PIC X(4) VALUE SPACES.
       77  MAX-PARM                  PIC 99.
       77  INPUT-FLAG                PIC 9 VALUE 0.
       77  TITLE-1-HOLD              PIC X(24).
       77  TITLE-2-HOLD              PIC X(24).
       77  NO-OF-UTILS-HOLD          PIC 99.
       77  UTIL-CODE-HOLD            PIC X VALUE 'X'.
       77  LEFT-PAREN                PIC X VALUE '('.
       77  RIGHT-PAREN               PIC X VALUE ')'.
       77  CURR-PERCENT-HOLD         PIC S9(5)V9.
       77  YTD-PERCENT-HOLD          PIC S9(5)V9.
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01  REVENUE-EXPENDITURES-SUBS.
    05  FUNDS OCCURS 6 TIMES.
        10  REV-EXP OCCURS 2 TIMES.
            15  REV-EXP-ACROSS OCCURS 8 TIMES.
                20  REV-EXP-SUB PIC S9(8)V99.
01  ACCOUNT-ACCUMULATOR.
    05  AMTS OCCURS 8 TIMES PIC S9(8)V9999.
01  FUND-BALANCE-ACCUMULATOR.
    05  TOTAL-FUND-BALANCE PIC S9(8)V99.
    05  FUND-BALANCE       PIC S9(8)V99 OCCURS 6 TIMES.
01  TITLE-LINE-1.
    05  FILLER             PIC X(54) VALUE SPACES.
    05  TITLE-1            PIC X(24).
    05  FILLER             PIC X(54) VALUE SPACES.
01  TITLE-LINE-2.
    05  FILLER             PIC X(54) VALUE SPACES.
    05  TITLE-2            PIC X(24) VALUE SPACES.
    05  FILLER             PIC X(43) VALUE SPACES.
    05  FILLER             PIC X(6)  VALUE 'PAGE: '.
    05  PAGE-OUT           PIC Z(4).
    05  FILLER             PIC X     VALUE SPACES.
01  TITLE-LINE-3.
    05  FILLER             PIC X(47) VALUE SPACES.
    05  FILLER             PIC X(38) VALUE 'STATEMENT OF REVENUES A
-                                    'ND EXPENDITURES'.
    05  FILLER             PIC X(47) VALUE SPACES.
01  TITLE-LINE-4.
    05  FILLER             PIC X(55) VALUE SPACES.
    05  FILLER             PIC X(21) VALUE 'FOR THE PERIOD ENDING'.
    05  FILLER             PIC X(56) VALUE SPACES.
01  TITLE-LINE-5.
    05  FILLER             PIC X(58) VALUE SPACES.
    05  DATE-OUT           PIC X(18) VALUE SPACES.
    05  FILLER             PIC X(56) VALUE SPACES.
01  HEADING-1.
    05  FILLER             PIC X(28) VALUE SPACES.
    05  FILLER             PIC X(14) VALUE '**************'.
    05  FILLER             PIC X(04) VALUE SPACES.
    05  FILLER             PIC X(11) VALUE 'A C T U A L'.
    05  FILLER             PIC X(04) VALUE SPACES.
    05  FILLER             PIC X(14) VALUE '*************'.
    05  FILLER             PIC X(04) VALUE SPACES.
    05  FILLER             PIC X(04) VALUE '****'.
    05  FILLER             PIC X(02) VALUE SPACES.
    05  FILLER             PIC X(15) VALUE 'B U D G E T E D'.
    05  FILLER             PIC X(02) VALUE SPACES.
    05  FILLER             PIC X(04) VALUE '****'.
    05  FILLER             PIC X(05) VALUE SPACES.
    05  FILLER             PIC X(21) VALUE 'VARIANCE YEAR TO DATE'.
01  HEADING-2.
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           05  FILLER              PIC X(29) VALUE SPACES.
           05  FILLER              PIC X(11) VALUE 'CURR PERIOD'.
           05  FILLER              PIC X(03) VALUE SPACES.
           05  FILLER              PIC X(07) VALUE 'PERCENT'.
           05  FILLER              PIC X(03) VALUE SPACES.
           05  FILLER              PIC X(12) VALUE 'YEAR TO DATE'.
           05  FILLER              PIC X(03) VALUE SPACES.
           05  FILLER              PIC X(07) VALUE 'PERCENT'.
           05  FILLER              PIC X(04) VALUE SPACES.
           05  FILLER              PIC X(12) VALUE 'YEAR TO DATE'.
           05  FILLER              PIC X(04) VALUE SPACES.
           05  FILLER              PIC X(10) VALUE 'ANNUAL AMT'.
           05  FILLER              PIC X(07) VALUE SPACES.
           05  FILLER              PIC X(07) VALUE 'BALANCE'.
           05  FILLER              PIC X(06) VALUE SPACES.
           05  FILLER              PIC X(07) VALUE 'PERCENT'.
       01  DATA-LINE.
           05  DESC-OUT.
               10  FILLER          PIC XX.
               10  DESC-OUT-1      PIC X(20).
           05  FILLER              PIC X(6).
           05  DOLLAR-SIGN-1       PIC X.
           05  CURR-VALUE-OUT      PIC -(8).--.
           05  FILLER              PIC X.
           05  LEFT-PAREN-1        PIC X.
           05  CURR-PERCENT-OUT    PIC Z(5).Z.
           05  RIGHT-PAREN-1       PIC X.
           05  FILLER              PIC X(3).
           05  DOLLAR-SIGN-2       PIC X.
           05  YTD-VALUE-OUT       PIC -(8).--.
           05  FILLER              PIC X.
           05  LEFT-PAREN-2        PIC X.
           05  YTD-PERCENT-OUT     PIC Z(5).Z.
           05  RIGHT-PAREN-2       PIC X.
           05  FILLER              PIC X(4).
           05  DOLLAR-SIGN-3       PIC X.
           05  YTD-BUDGET-OUT      PIC -(8).--.
           05  FILLER              PIC X(3).
           05  DOLLAR-SIGN-4       PIC X.
           05  ANNUAL-BUDGET-OUT         PIC -(8).--.
           05  FILLER              PIC X(4).
           05  DOLLAR-SIGN-5       PIC X.
           05  VARIANCE-VALUE-OUT        PIC -(8).--.
           05  FILLER              PIC X.
           05  VARIANCE-PERCENT-OUT  PIC -(7).-.
       01  FUND-TITLE-NAMES.
           05  FUND-TITLES-A.
               10  FILLER          PIC X(063) VALUE  ' GENERAL REVENUE FUND
      -                                               '     OPERATION AND
      -                                              '    WATER REVENUE    '.
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         10  FILLER       PIC X(063) VALUE  '  DEPRECIATION FUND
-                                            '     PLANT FUND
-                                         'RENEWAL & REPLACEMENT'.
     05  FUND-TITLES-1   REDEFINES FUND-TITLES-A
             PIC X(21) OCCURS 6 TIMES.
     05  FUND-TITLES-B.
         10  FILLER       PIC X(105) VALUE  '
-                                            '  MAINTENANCE FUND
-                                          '      BOND FUND      '.
         10  FILLER       PIC X(063) VALUE  '
-                                            '
-                                          '        FUND       '.
     05  FUND-TITLES-2 REDEFINES FUND-TITLES-B
             PIC X(21) OCCURS 6 TIMES.
 01  GROUP-TITLE-NAMES.
     05  GROUP-TITLE-A    PIC X(36) VALUE     'REVENUE
-                                            'EXPENDITURES       '.
     05  GROUP-TITLES-TOP REDEFINES GROUP-TITLE-A
             PIC X(18) OCCURS 2 TIMES.
     05  GROUP-TITLE-B    PIC X(36) VALUE      'TOTAL REVENUE
-                                            'TOTAL EXPENDITURES'.
     05  GROUP-TITLES-BOTTOM REDEFINES GROUP-TITLE-B
             PIC X(18) OCCURS 2 TIMES.
 PROCEDURE DIVISION.
 OPEN-FILES.
     OPEN INPUT  FINANCIAL-ACCT-TABFI, SORTED-FILE,
                 DATE-TITLE-FILE
         OUTPUT PRINT-OUT, FUND-BALANCE-FILE.
 READ-DATE-TITLE-FILE.
     READ DATE-TITLE-FILE AT END
         MOVE 'EOF ON DATE TITLE FILE ' TO PRINT-LINE
         PERFORM PRINT-LINE-OUT
         GO TO CLOSE-FILES.
 FILL-HEADING.
     MOVE DATE-IN TO DATE-OUT.
     MOVE FIRST-TITLE TO TITLE-1-HOLD.
     MOVE SECOND-TITLE TO TITLE-2-HOLD.
     MOVE NO-OF-UTILS TO NO-OF-UTILS-HOLD.
 FIND-PERCENT-OF-YEAR-FACTOR.
     DIVIDE CURRENT-MONTH BY 12 GIVING YEARLY-PERCENT.
 PROCESS-SEVERAL-UTILITIES.
     IF UTIL-CODE-HOLD = SPACES
         GO TO CLOSE-FILES.
     IF NO-OF-UTILS-HOLD = 0
         MOVE SPACES TO UTIL-CODE-HOLD
         MOVE TITLE-1-HOLD TO TITLE-1
         MOVE TITLE-2-HOLD TO TITLE-2
         MOVE 0 TO PAGE-NO
         GO TO HOUSE-KEEPING.
     SUBTRACT 1 FROM NO-OF-UTILS-HOLD.
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           PERFORM READ-DATE-TITLE-FILE.
           MOVE FIRST-TITLE TO TITLE-1.
           MOVE SECOND-TITLE TO TITLE-2.
           MOVE UTILITY-CODE TO UTIL-CODE-HOLD.
           MOVE 0 TO PAGE-NO.
       HOUSE-KEEPING.
           MOVE ZEROS TO REVENUE-EXPENDITURES-SUBS,
               FUND-BALANCE-ACCUMULATOR,
               ACCOUNT-ACCUMULATOR.
       PRINT-HEADINGS.
           ADD 1 TO PAGE-NO.
           MOVE PAGE-NO TO PAGE-OUT.
           MOVE ZERO TO LINE-CT.
           MOVE SPACES TO PRINT-LINE.
           WRITE PRINT-LINE BEFORE NEW-PAGE.
           MOVE TITLE-LINE-1 TO PRINT-DATA.
           PERFORM PRINT-LINE-OUT.
           MOVE TITLE-LINE-2 TO PRINT-DATA.
           PERFORM PRINT-LINE-OUT.
           MOVE TITLE-LINE-3 TO PRINT-DATA.
           PERFORM PRINT-LINE-OUT.
           MOVE TITLE-LINE-4 TO PRINT-DATA.
           PERFORM PRINT-LINE-OUT.
           MOVE TITLE-LINE-5 TO PRINT-DATA.
           PERFORM PRINT-LINE-OUT.
           PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
           PERFORM PRINT-LINE-OUT.
           MOVE HEADING-1 TO PRINT-DATA.
           PERFORM PRINT-LINE-OUT.
           MOVE HEADING-2 TO PRINT-DATA.
           PERFORM PRINT-LINE-OUT.
           PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
       SUM-UP-SORTED-FILE.
           READ SORTED-FILE AT END
               GO TO COMPUTE-SUBTOTAL-PERCENTAGE.
           IF SUB-UTIL-CODE NOT = UTIL-CODE-HOLD
               GO TO SUM-UP-SORTED-FILE.
           IF FRS-MATCH-CODE NOT NUMERIC
               GO TO SUM-UP-SORTED-FILE.
       CHECK-FIRST-POS.
           IF FIRST-POS < 1
               GO TO SUM-UP-SORTED-FILE.
           IF FIRST-POS > 6 GO TO COMPUTE-SUBTOTAL-PERCENTAGE.
           IF SECOND-POS < 5
               ADD AMOUNTS (1) TO REV-EXP-SUB (FIRST-POS, 1, 1)
               ADD AMOUNTS (3) TO REV-EXP-SUB (FIRST-POS, 1, 3)
               ADD AMOUNTS (4) TO REV-EXP-SUB (FIRST-POS, 1, 6)
           ELSE
               ADD AMOUNTS (1) TO REV-EXP-SUB (FIRST-POS, 2, 1)
               ADD AMOUNTS (3) TO REV-EXP-SUB (FIRST-POS, 2, 3)
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        ADD AMOUNTS (4) TO REV-EXP-SUB (FIRST-POS, 2, 6).
    GO TO SUM-UP-SORTED-FILE.
COMPUTE-SUBTOTAL-PERCENTAGE.
    IF UTIL-CODE-HOLD = 'I'
    PERFORM COMPUTE-BALANCE-PERCENTAGE VARYING I
        FROM 1 BY 1 UNTIL I > 6
    ELSE PERFORM COMPUTE-BALANCE-PERCENTAGE VARYING I
        FROM 1 BY 1 UNTIL I > 5.
REWIND-SORTED-FILE.
    CLOSE SORTED-FILE.
    OPEN INPUT SORTED-FILE.
START-PROCESSING.
    PERFORM ADVANCE-FILE-TO-UTIL-CODE THRU
            ADVANCE-FILE-TO-UTIL-CODE-END.
    IF UTIL-CODE-HOLD = 'I'
        PERFORM SUM-ACCTS THRU SUM-ACCTS-END
            VARYING I FROM 1 BY 1 UNTIL I > 6
    ELSE
        PERFORM SUM-ACCTS THRU SUM-ACCTS-END
            VARYING I FROM 1 BY 1 UNTIL I > 5.
    MOVE FUND-BALANCE-ACCUMULATOR TO FUND-BAL-REC.
    WRITE FUND-BAL-REC.
    GO TO PROCESS-SEVERAL-UTILITIES.
SUM-ACCTS.
    IF (I = 2 OR 4 OR 5) AND (UTIL-CODE-HOLD = 'I')
        GO TO SUM-ACCTS-END.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
    MOVE SPACES TO DATA-LINE.
    MOVE FUND-TITLES-1 (I) TO DESC-OUT.
    MOVE DATA-LINE TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    MOVE FUND-TITLES-2 (I) TO DESC-OUT.
    MOVE DATA-LINE TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT 2 TIMES.
    MOVE SPACES TO DATA-LINE.
    PERFORM PAGE-OVFLOW.
    PERFORM SUM-ACCTS-BY-LINE THRU SUM-ACCTS-BY-LINE-END
        VARYING J FROM 1 BY 1 UNTIL J > 2.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
    ADD REV-EXP-SUB (I, 1, 1)
        REV-EXP-SUB (I, 2, 1)  GIVING CURR-VALUE-OUT,
            FUND-BALANCE (I), AMTS (2).
    ADD FUND-BALANCE (I) TO TOTAL-FUND-BALANCE.
    IF REV-EXP-SUB (I, 1, 1) NOT = 0
        DIVIDE AMTS (2) BY REV-EXP-SUB (I, 1, 1)
            GIVING AMTS (2)
    ELSE MOVE 0 TO AMTS (2).
    MULTIPLY 100.0 BY AMTS (2).
    ADD 0.05 TO AMTS (2).
    MOVE AMTS (2) TO CURR-PERCENT-OUT CURR-PERCENT-HOLD.
    ADD REV-EXP-SUB (I, 1, 3) REV-EXP-SUB (I, 2, 3)
        GIVING YTD-VALUE-OUT, AMTS (4).
    IF REV-EXP-SUB (I, 1, 3) NOT = 0
        DIVIDE AMTS (4) BY REV-EXP-SUB (I, 1, 3)
            GIVING AMTS (4)
    ELSE MOVE 0 TO AMTS (4).
    MULTIPLY 100.0 BY AMTS (4).
    ADD 0.05 TO AMTS (4).
    MOVE AMTS (4) TO YTD-PERCENT-OUT YTD-PERCENT-HOLD.
    ADD REV-EXP-SUB (I, 1, 5)
        REV-EXP-SUB (I, 2, 5)  GIVING YTD-BUDGET-OUT.
    ADD REV-EXP-SUB (I, 1, 6)
        REV-EXP-SUB (I, 2, 6)  GIVING ANNUAL-BUDGET-OUT.
    MOVE ZERO TO VARIANCE-VALUE-OUT.
    MOVE ZERO TO VARIANCE-PERCENT-OUT.
    MOVE 'BALANCE' TO DESC-OUT.
    PERFORM FILL-DOLLAR-SIGNS.
    PERFORM FILL-PARENS.
    MOVE DATA-LINE TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT 2 TIMES.
SUM-ACCTS-END.
    EXIT.
SUM-ACCTS-BY-LINE.
    MOVE SPACES TO DATA-LINE.
    MOVE GROUP-TITLES-TOP (J) TO DESC-OUT.
    MOVE DATA-LINE TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
    PERFORM PAGE-OVFLOW.
    MOVE SPACES TO DATA-LINE.
    MULTIPLY J BY 5 GIVING MAX-PARM.
READ-INPUT-REC.
    PERFORM MOVE-IN-ZEROS VARYING K
        FROM 1 BY 1 UNTIL K > 8.
    IF INPUT-FLAG NOT = 0
        MOVE 0 TO INPUT-FLAG
        GO TO CHECK-FOR-CORRECT-FUND.
CONT-INPUT-READ.
    READ SORTED-FILE AT END
        PERFORM COMPUTE-ACCT-PERCENTAGES THRU
            PRINT-ACCT-LINE
        GO TO SUM-ACCTS-BY-LINE-END.
CHECK-FOR-CORRECT-FUND.
    IF FRS-MATCH-CODE NOT NUMERIC
        GO TO CONT-INPUT-READ.
    IF FIRST-POS NOT = I
        GO TO SUM-ACCTS-BY-LINE-END.
SET-UP-ACCT-INFO.
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    IF SUB-UTIL-CODE NOT = UTIL-CODE-HOLD
        MOVE 0 TO INPUT-FLAG
        GO TO SUM-ACCTS-BY-LINE-END.
    MOVE FRS-MATCH-CODE TO MATCH-HOLD.
    MOVE ACCT-NO TO FA-NOMINAL.
    READ FINANCIAL-ACCT-TABFI
        INVALID KEY MOVE '**** INVALID ACCT NO'
            TO FA-NAME (1) , FA-NAME (2).
START-ACCUM-PROCESSING.
    ADD AMOUNTS (1) TO AMTS (1).
    ADD AMOUNTS (3) TO AMTS (3).
    MULTIPLY AMOUNTS (4) BY YEARLY-PERCENT GIVING TEMP-HOLD.
    ADD TEMP-HOLD TO AMTS (5).
    ADD AMOUNTS (4) TO AMTS (6).
LOOK-AT-NEXT-REC.
    READ SORTED-FILE AT END
        PERFORM COMPUTE-ACCT-PERCENTAGES THRU
            PRINT-ACCT-LINE
        GO TO SUM-ACCTS-BY-LINE-END.
    IF FRS-MATCH-CODE NOT NUMERIC
        GO TO LOOK-AT-NEXT-REC.
    IF FRS-MATCH-CODE = MATCH-HOLD
        GO TO START-ACCUM-PROCESSING.
    MOVE 1 TO INPUT-FLAG.
COMPUTE-ACCT-PERCENTAGES.
    IF REV-EXP-SUB (I, 1, 1) NOT = ZERO
    DIVIDE REV-EXP-SUB (I, 1, 1) INTO AMTS (1)
        GIVING AMTS (2).
    MULTIPLY 100.00 BY AMTS (2).
    ADD 0.05 TO AMTS (2).
    IF J = 2
        MULTIPLY -1.0 BY AMTS (2).
    IF REV-EXP-SUB (I, 1, 3) NOT = ZERO
    DIVIDE REV-EXP-SUB (I, 1, 3) INTO AMTS (3)
        GIVING AMTS (4).
    MULTIPLY 100.00 BY AMTS (4).
    ADD 0.05 TO AMTS (4).
    IF J = 2
        MULTIPLY -1.0 BY AMTS (4).
    SUBTRACT AMTS (5) FROM AMTS (3) GIVING AMTS (7).
    IF AMTS (5) NOT = ZERO
    DIVIDE AMTS (5) INTO AMTS (3)
        GIVING AMTS (8).
    MULTIPLY 100.00 BY AMTS (8).
    ADD 0.05 TO AMTS (8).
MOVE-VALUES-TO-PRINT-LINE.
    MOVE AMTS (1) TO CURR-VALUE-OUT.
    MOVE AMTS (2) TO CURR-PERCENT-OUT, CURR-PERCENT-HOLD.
    MOVE AMTS (3) TO YTD-VALUE-OUT.
    MOVE AMTS (4) TO YTD-PERCENT-OUT,  YTD-PERCENT-HOLD.
    MOVE AMTS (5) TO YTD-BUDGET-OUT.
    MOVE AMTS (6) TO ANNUAL-BUDGET-OUT.
    MOVE AMTS (7) TO VARIANCE-VALUE-OUT.
    MOVE AMTS (8) TO VARIANCE-PERCENT-OUT.
    PERFORM FILL-PARENS.
PRINT-ACCT-LINE.
    IF (I = 2) AND (J = 2)
        PERFORM CHANGE-ACCOUNT-DESCRIPTIONS.
    MOVE FA-NAME (1) TO DESC-OUT-1.
    MOVE DATA-LINE TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    MOVE SPACES TO DATA-LINE.
    IF FA-NAME (2) NOT = SPACES
        MOVE FA-NAME (2) TO DESC-OUT-1
        MOVE DATA-LINE TO PRINT-DATA
        PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PAGE-OVFLOW.
CHECK-NEXT-RECORD-AGAIN.
    IF (FIRST-POS = I ) AND (SECOND-POS < MAX-PARM)
        GO TO READ-INPUT-REC.
SUM-ACCTS-BY-LINE-END.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
    MOVE GROUP-TITLES-BOTTOM (J) TO DESC-OUT.
    MOVE REV-EXP-SUB (I, J, 1) TO CURR-VALUE-OUT.
    IF REV-EXP-SUB (I, J, 1) = 0
        MOVE 0 TO REV-EXP-SUB (I, J, 2).
    MOVE REV-EXP-SUB (I, J, 2) TO CURR-PERCENT-OUT.
    MOVE REV-EXP-SUB (I, J, 3) TO YTD-VALUE-OUT.
    IF REV-EXP-SUB (I, J, 3) = 0
        MOVE 0 TO REV-EXP-SUB (I, J, 4).
    MOVE REV-EXP-SUB (I, J, 4) TO YTD-PERCENT-OUT.
    MOVE REV-EXP-SUB (I, J, 5) TO YTD-BUDGET-OUT.
    MOVE REV-EXP-SUB (I, J, 6) TO ANNUAL-BUDGET-OUT.
    MOVE REV-EXP-SUB (I, J, 7) TO VARIANCE-VALUE-OUT.
    MOVE REV-EXP-SUB (I, J, 8) TO VARIANCE-PERCENT-OUT.
    PERFORM FILL-DOLLAR-SIGNS.
    PERFORM FILL-PARENS.
    MOVE DATA-LINE TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT THRU PAGE-OVFLOW.
    PERFORM MOVE-SPACES THRU PAGE-OVFLOW 2 TIMES.
    MOVE SPACES TO DATA-LINE.
COMPUTE-BALANCE-PERCENTAGE.
    PERFORM COMPUTE-PERCENT-A VARYING J
        FROM 1 BY 1 UNTIL J > 2.
COMPUTE-PERCENT-A.
    MOVE 100.00 TO REV-EXP-SUB (I, 1, 2)
                   REV-EXP-SUB (I, 1, 4)
    IF REV-EXP-SUB (I, 1, 1) NOT = ZERO
        DIVIDE REV-EXP-SUB (I, 1, 1) INTO
            REV-EXP-SUB (I, 2, 1) GIVING
            AMTS (1).
    IF REV-EXP-SUB (I, 1, 3) NOT = ZERO
        DIVIDE REV-EXP-SUB (I, 1, 3) INTO
            REV-EXP-SUB (I, 2, 3) GIVING
            AMTS (2).
    MULTIPLY 100.00 BY AMTS (1) GIVING
            REV-EXP-SUB (I, 2, 2).
    MULTIPLY 100.00 BY AMTS (2) GIVING
            REV-EXP-SUB (I, 2, 4).
    ADD 0.05  TO REV-EXP-SUB (I, 2, 2), REV-EXP-SUB (I, 2, 4).
    MULTIPLY -1.0 BY REV-EXP-SUB (I, 2, 2).
    MULTIPLY -1.0 BY REV-EXP-SUB (I, 2, 4).
    MULTIPLY REV-EXP-SUB (I, J, 6) BY YEARLY-PERCENT
        GIVING REV-EXP-SUB (I, J, 5).
    SUBTRACT REV-EXP-SUB (I, J, 5) FROM
        REV-EXP-SUB (I, J, 3) GIVING
        REV-EXP-SUB (I, J, 7).
    MOVE ZERO TO REV-EXP-SUB (I, J, 8).
    IF REV-EXP-SUB (I, J, 3) NOT = ZERO
    DIVIDE REV-EXP-SUB (I, J, 3) INTO
        REV-EXP-SUB (I, J, 5) GIVING
        REV-EXP-SUB (I, J, 8).
    MULTIPLY 100.00 BY REV-EXP-SUB (I, J, 8).
    ADD 0.05  TO REV-EXP-SUB (I, J, 8).
MOVE-SPACES.
    MOVE SPACES TO PRINT-LINE.
PRINT-LINE-OUT.
    WRITE PRINT-LINE BEFORE 1.
    ADD 1 TO LINE-CT.
PAGE-OVFLOW.
    IF LINE-CT > MAX-LINE
        PERFORM PRINT-HEADINGS.
MOVE-IN-ZEROS.
    MOVE POS-ZERO TO AMTS (K).
ADVANCE-FILE-TO-UTIL-CODE.
    READ SORTED-FILE AT END
        GO TO CLOSE-FILES.
    IF FRS-MATCH-CODE NOT NUMERIC
        GO TO ADVANCE-FILE-TO-UTIL-CODE.
    IF SUB-UTIL-CODE = UTIL-CODE-HOLD
        MOVE 1 TO INPUT-FLAG
        GO TO ADVANCE-FILE-TO-UTIL-CODE-END.
    GO TO ADVANCE-FILE-TO-UTIL-CODE.
ADVANCE-FILE-TO-UTIL-CODE-END.
    EXIT.
FILL-DOLLAR-SIGNS.
    MOVE DOLLAR-SIGN TO DOLLAR-SIGN-1, DOLLAR-SIGN-2,
        DOLLAR-SIGN-3, DOLLAR-SIGN-4, DOLLAR-SIGN-5.
FILL-PARENS.
    IF CURR-PERCENT-HOLD < 0
```

```
        MOVE LEFT-PAREN TO LEFT-PAREN-1
        MOVE RIGHT-PAREN TO RIGHT-PAREN-1.
    IF YTD-PERCENT-HOLD < 0
        MOVE LEFT-PAREN TO LEFT-PAREN-2
        MOVE RIGHT-PAREN TO RIGHT-PAREN-2.
CHANGE-ACCOUNT-DESCRIPTIONS.
    IF ACCT-TYPE = '45'
        MOVE 'SOURCE OF SUPPLY'       TO FA-NAME (1).
    IF ACCT-TYPE = '50'
        MOVE 'PUMPING'                TO FA-NAME (1).
    IF ACCT-TYPE = '55'
        MOVE 'WATER TREATMENT'        TO FA-NAME (1).
    IF ACCT-TYPE = '60'
        MOVE 'TRANS & DISTRIBUTION'   TO FA-NAME (1).
    IF ACCT-TYPE = '65'
        MOVE 'CUSTOMER ACCOUNTS'      TO FA-NAME (1).
    IF ACCT-TYPE = '70'
        MOVE 'ADMIN & GENERAL'        TO FA-NAME (1).
    IF ACCT-TYPE = '80'
        MOVE 'MAINT OF TAYLOR'        TO FA-NAME (1)
        MOVE 'MILL SYSTEM'            TO FA-NAME (2).
CLOSE-FILES.
    CLOSE   FINANCIAL-ACCT-TABFI, PRINT-OUT,
            DATE-TITLE-FILE,
            FUND-BALANCE-FILE,
            SORTED-FILE.
STOP-RUN.
    STOP RUN.
```

```
//         PGMNAME=FAMSFUBS
       IDENTIFICATION DIVISION.
       PROGRAM-ID. FAMSFUBS.
       AUTHOR. ACT SYSTEMS, INC
               SUITE 200
               807 W MORSE BLVD
               WINTER PARK, FL 32789.
       DATE-WRITTEN. MARCH 1979.
       REMARKS.    THIS PROGRAM READS A SORTED FILE OF THE
                   CROSS MATRIX FILE ,   SUMS WITHIN EACH
                   FUND ACCOUNT AND PRODUCES A BALANCE SHEET.
       ENVIRONMENT DIVISION.
       CONFIGURATION SECTION.
       SOURCE-COMPUTER. IBM-370-168.
       OBJECT-COMPUTER. IBM-370-168.
       SPECIAL-NAMES.
           C01 IS NEW-PAGE.
       INPUT-OUTPUT SECTION.
       FILE-CONTROL.
           SELECT FINANCIAL-ACCT-TABFI
               ASSIGN TO DA-3330-I-FATABFI
               ACCESS MODE IS RANDOM
               NOMINAL KEY IS FA-NOMINAL
               RECORD KEY IS FA-NUMBER.
           SELECT PRINT-OUT
               ASSIGN TO UR-1403-S-PRINTOUT
               ACCESS MODE IS SEQUENTIAL.
           SELECT SORTED-FILE
               ASSIGN TO UT-3330-S-SORTEDFI
               ACCESS MODE IS SEQUENTIAL.
           SELECT DATE-TITLE-FILE
               ASSIGN TO UT-3330-S-DATEFILE
               ACCESS MODE IS SEQUENTIAL.
      *****************************************************************
      *
      *    SELECT FUND-BALANCE-FILE
      *        ASSIGN TO UT-3330-S-FUNDBAL
      *        ACCESS MODE IS SEQUENTIAL.
      *
      *****************************************************************
       DATA DIVISION.
       FILE SECTION.
       FD  FINANCIAL-ACCT-TABFI
           BLOCK CONTAINS 8 RECORDS
           RECORD CONTAINS 58 CHARACTERS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS FA-REC.
       01  FA-REC.
           05  FA-NUMBER           PIC X(10).
           05  FA-NAME             PIC X(20) OCCURS 2 TIMES.
```

```
        05  FUND-NUM          PIC XX.
        05  ACCT-NUM          PIC XX.
        05  FRS-MATCH         PIC X(4).
    FD  PRINT-OUT
        RECORD CONTAINS 133 CHARACTERS
        LABEL RECORDS ARE OMITTED
        DATA RECORD IS PRINT-LINE.
    01  PRINT-LINE.
        05  FILLER            PIC X.
        05  PRINT-DATA        PIC X(132).
    FD  DATE-TITLE-FILE
        RECORD CONTAINS 316 CHARACTERS
        BLOCK CONTAINS 2 RECORDS
        LABEL RECORDS ARE STANDARD
        DATA RECORD IS DATE-TITLE-REC.
    01  DATE-TITLE-REC.
        05  DATE-IN           PIC X(18).
        05  CURRENT-MONTH     PIC 99.
        05  BEGINNING-DATE    PIC X(18).
        05  REPORT-PERIOD-ALPHA       PIC X(7).
        05  REPORT-PERIOD-NUMERIC     PIC 99.
        05  CONVERSION-FACTOR         PIC V999.
        05  NO-OF-ZONES       PIC 99.
        05  TYPE-OF-SYSTEM    PIC 99.
        05  UTIL-CODE.
            10  UTILITY-CODE PIC X.
            10  UTILITY-CODE-1 PIC X.
        05  NO-OF-UTILS       PIC 99.
        05  FIRST-TITLE       PIC X(24).
        05  SECOND-TITLE      PIC X(24).
        05  TREATED-WATER.
            10  TREATED-MG    PIC 9(7)V999 OCCURS 7 TIMES.
        05  BILLED-WATER.
            10  BILLED-MG     PIC 9(7)V999 OCCURS 7 TIMES.
        05  YTD-WATER.
            10  YTD-MG        PIC 9(7)V999 OCCURS 7 TIMES.
    FD  SORTED-FILE
        RECORD CONTAINS 80 CHARACTERS
        BLOCK CONTAINS 5 RECORDS
        LABEL RECORDS ARE STANDARD
        DATA RECORD IS INPUT-REC.
    01  INPUT-REC.
        05  FRS-MATCH-CODE.
            10  FRS-POS-1     PIC 9.
            10  FRS-POS-2     PIC 9.
            10  FRS-LAST      PIC 99.
        05  ACCT-NO.
            10  FILLER        PIC X(8).
            10  UTILITY-CODE-IN.
                15  UTIL-CODE-IN    PIC X.
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```
             15  UTIL-CODE-IN-1  PIC X.
     05  FUND-TYPE          PIC 9(2).
     05  ACCT-TYPE          PIC X(2).
     05  FILLER             PIC XX.
     05  AMOUNTS            PIC S9(8)V99 OCCURS 6 TIMES.
*****
*      THE ABOVE AMTS (AMOUNTS) ARE AS FOLLOWS
*         (1) -- CURRENT COST AMOUNT
*         (2) -- PREVIOUS MONTH COST AMOUNT
*         (3) -- CURRENT COST AMOUNT YEAR TO DATE (YTD)
*         (4) -- BUDGET AMOUNT
*         (5) -- PREVIOUS YEAR COST AMOUNT (PYC)
*         (6) NOT USED
*****
*
*
*    SORTED-FILE IS THE CROSS MATRIX FILE SORTED IN ASCENDING
*
*    ORDER WITHIN THE FRS MATCH CODE FROM 7XXX TO 9XXX.
*
*
*
*
*
****************************************************************
*
*  THE FILE FUND-BALANCE-FILE AND ALL REFS TO FUND BALANCES
*  WERE CHANGED TO COMMENTS, THE FUND BALANCE WILL BE THE
*  DIFFERENCE BETWEEN ASSETS AND LIABILITIES.  IF IN THE
*  FUTURE THE NEED FOR THE FUND BALANCE FROM SORE IS NEEDED
*  JUST REPLACE THE COMMENT CARDS WITH BLANKS.
*  THEN REPLACE THE REFS TO FUND-DIFFERENCES WITH COMMENTS
*  AND MAKE SURE TO MAKE PROVISIONS IN THE JCL BETWEEN
*  SORE AND FUBS TO TRANSFER THE TRUE FUND BALANCE.
*
*
****************************************************************
*
*FD  FUND-BALANCE-FILE
*    RECORD CONTAINS 70 CHARACTERS
*    BLOCK CONTAINS 5 RECORDS
*        LABEL RECORDS ARE STANDARD
*        DATA RECORD IS FUND-BAL-REC.
*01  FUND-BAL-REC.
*    05  TOTAL-FUND-BALANCE PIC S9(8)V99.
*    05  FUND-BALANCE       PIC S9(8)V99 OCCURS 6 TIMES.
*
****************************************************************
 WORKING-STORAGE SECTION.
 77  FA-NOMINAL             PIC X(10).
```

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77  PAGE-NO             PIC 9(4) VALUE 0.
77  LINE-CT             PIC 99.
77  MAX-LINE            PIC 99   VALUE 52.
77  DOLLAR-SIGN         PIC X    VALUE '$'.
77  MATCH-HOLD          PIC X(4) VALUE SPACES.
77  I                   PIC 99.
77  J                   PIC 99.
77  K                   PIC 99.
77  M                   PIC 99.
77  PRIMARY-PARM        PIC 99.
77  SECONDARY-PARM      PIC 99.
77  REC-HOLD            PIC X(80) VALUE SPACES.
77  TITLE-1-HOLD        PIC X(24).
77  TITLE-2-HOLD        PIC X(24).
77  NO-OF-UTILS-HOLD    PIC 99.
77  UTIL-CODE-HOLD      PIC X  VALUE 'I'.
01  VALUE-ACCUMS.
    05  TOT-ACCUM-BY-LINE    PIC S9(8)V99 OCCURS 2 TIMES.
    05  FUND-ACCUM-BY-LINE   PIC S9(8)V99 OCCURS 5 TIMES.
01  SUB-TOTAL-ACCUM.
    05  SUB-TOTALS      PIC S9(9)V99 OCCURS 2 TIMES.
    05  SUB-TOTAL-FUNDS PIC S9(9)V99 OCCURS 5 TIMES.
01  TOTAL-ASSETS-ACCUM.
    05  TOTAL-ASSETS    PIC S9(9)V99 OCCURS 2 TIMES.
    05  TOTAL-ASSETS-FUNDS  PIC S9(9)V99 OCCURS 5 TIMES.
01  TOTAL-LIABILITIES-ACCUM.
    05  TOTAL-LIABILITIES   PIC S9(9)V99 OCCURS 2 TIMES.
    05  TOTAL-LIABILITIES-FUNDS PIC S9(9)V99 OCCURS 5 TIMES.
01  ASSETS-LIABILITIES-DIFFERENCE.
    05  TOT-DIFF        PIC S9(9)V99 OCCURS 2 TIMES.
    05  TOT-DIFF-FUNDS  PIC S9(9)V99 OCCURS 6 TIMES.
01  DESCRIPTION-NAMES.
    05  DESC-NAME-A     PIC X(22) VALUE
                        '   ASSETS  LIABILITIES'.
    05  DESC-TOP  REDEFINES DESC-NAME-A
                        PIC X(11) OCCURS 2 TIMES.
    05  DESC-NAME-B     PIC X(34) VALUE
                        '   TOTAL ASSETS  TOTAL LIABILITIES'.
    05  DESC-BOTTOM REDEFINES DESC-NAME-B
                        PIC X(17) OCCURS 2 TIMES.
01  TITLE-LINE-1.
    05  FILLER          PIC X(54) VALUE SPACES.
    05  TITLE-1         PIC X(24) VALUE SPACES.
    05  FILLER          PIC X(54) VALUE SPACES.
01  TITLE-LINE-2.
    05  FILLER          PIC X(54) VALUE SPACES.
    05  TITLE-2         PIC X(24) VALUE SPACES.
    05  FILLER          PIC X(43) VALUE SPACES.
    05  FILLER          PIC X(6)  VALUE 'PAGE: '.
    05  PAGE-OUT        PIC Z(4).
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           05  FILLER              PIC X      VALUE SPACES.
       01  TITLE-LINE-3.
           05  FILLER              PIC X(52) VALUE SPACES.
           05  FILLER              PIC X(27) VALUE 'COMBINED FUND BALANCE S
      -                                        'HEET'.
           05  FILLER              PIC X(53) VALUE SPACES.
       01  TITLE-LINE-4.
           05  FILLER              PIC X(56) VALUE SPACES.
           05  FILLER              PIC X(19) VALUE 'YEAR TO DATE ENDING'.
           05  FILLER              PIC X(57) VALUE SPACES.
       01  TITLE-LINE-5.
           05  FILLER              PIC X(58) VALUE SPACES.
           05  DATE-OUT            PIC X(18) VALUE SPACES.
           05  FILLER              PIC X(56) VALUE SPACES.
       01  HEADING-1.
           05  FILLER              PIC X(62) VALUE SPACES.
           05  FILLER              PIC X(07) VALUE 'GENERAL'.
           05  FILLER              PIC X(05) VALUE SPACES.
           05  TEMP-HEAD-1-1       PIC X(13) VALUE SPACES.
           05  FILLER              PIC X(06) VALUE SPACES.
           05  FILLER              PIC X(05) VALUE 'WATER'.
           05  FILLER              PIC X(23) VALUE SPACES.
           05  TEMP-HEAD-1-2       PIC X(11) VALUE 'RENEWAL &   '.
       01  HEADING-2.
           05  FILLER              PIC X(31) VALUE SPACES.
           05  FILLER              PIC X(05) VALUE 'TOTAL'.
           05  FILLER              PIC X(12) VALUE SPACES.
           05  FILLER              PIC X(05) VALUE 'TOTAL'.
           05  FILLER              PIC X(09) VALUE SPACES.
           05  FILLER              PIC X(07) VALUE 'REVENUE'.
           05  FILLER              PIC X(06) VALUE SPACES.
           05  TEMP-HEAD-2-1       PIC X(11) VALUE SPACES.
           05  FILLER              PIC X(06) VALUE SPACES.
           05  FILLER              PIC X(07) VALUE 'REVENUE'.
           05  FILLER              PIC X(06) VALUE SPACES.
           05  TEMP-HEAD-2-2       PIC X(12) VALUE SPACES.
           05  FILLER              PIC X(3)  VALUE SPACES.
           05  TEMP-HEAD-2-3       PIC X(11) VALUE 'REPLACEMENT'.
           05  FILLER              PIC X(1)  VALUE SPACES.
       01  HEADING-3.
           05  FILLER              PIC X(28) VALUE SPACES.
           05  FILLER              PIC X(14) VALUE 'CURRENT PERIOD'.
           05  FILLER              PIC X(03) VALUE SPACES.
           05  FILLER              PIC X(12) VALUE 'YEAR TO DATE'.
           05  FILLER              PIC X(06) VALUE SPACES.
           05  FILLER              PIC X(04) VALUE 'FUND'.
           05  FILLER              PIC X(11) VALUE SPACES.
           05  TEMP-HEAD-3-1       PIC X(04) VALUE SPACES.
           05  FILLER              PIC X(09) VALUE SPACES.
           05  FILLER              PIC X(09) VALUE 'BOND FUND'.
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     05  FILLER           PIC X(09) VALUE SPACES.
     05  TEMP-HEAD-3-2    PIC X(04) VALUE SPACES.
     05  FILLER           PIC X(08) VALUE SPACES.
     05  TEMP-HEAD-3-3    PIC X(11) VALUE '   FUND    '.
 01  DATA-LINE.
     05  DESC-OUT.
         10  FILLER       PIC X(3).
         10  DESC-TITLE-OUT PIC X(20).
         10  FILLER       PIC X(1).
     05  FUND-TOTALS-OUT                OCCURS 2 TIMES.
         10  FILLER       PIC X(2).
         10  DOLLAR-SIGN-1 PIC X.
         10  FUND-TOT      PIC -(9).--.
     05  FUND-VALUES-OUT                OCCURS 5 TIMES.
         10  FILLER        PIC X(2).
         10  DOLLAR-SIGN-2  PIC X.
         10  FUND-VALUE    PIC -(9).--.
         05  FILLER       PIC X(3).
 01  ASSET-DESCRIPTIONAL-NAMES.
     05  ASSET-NAMES-A.
         10  FILLER       PIC X(110) VALUE 'CURRENT ASSETS
-                                          'TOTAL CURRENT ASSETS
-                                          'OTHER ASSETS
-                                          'TOTAL OTHER ASSETS
-                                         'FIXED ASSETS          '.
         10  FILLER       PIC X(110) VALUE 'TOTAL FIXED ASSETS
-                                          'DEFERRED DEBTS
-                                          'TOTAL DEFERRED DEBTS
-                                          '              NOT USED
-                                         '             '.NOT USED
     05  ASSET-NAMES REDEFINES ASSET-NAMES-A PIC X(22)
         OCCURS 10 TIMES.
 01  LIABILITY-DESCRIPTIONAL-NAMES.
     05  LIABILITY-NAMES-A.
         10  FILLER       PIC X(110) VALUE 'CURRENT LIABILITIES
-                                          'TOTAL CURR LIABILITIES
-                                          'CUSTOMER DEPOSITS
-                                          'TOTAL CUSTOMER DEPOSIT
-                                         'DEFFERED CREDITS      '.
         10  FILLER       PIC X(110) VALUE 'TOTAL DEFFERED CREDITS
-                                          'LONG TERM DEBTS
-                                          'TOTAL LONG TERM DEBTS
-                                          'CONTRIB CONSTRUCTION
-                                         'TOTAL CONTRIB CONSTRUC'.
     05  LIABILITY-NAME REDEFINES LIABILITY-NAMES-A PIC X(22)
         OCCURS 10 TIMES.
 PROCEDURE DIVISION.
 OPEN-FILES.
     OPEN INPUT  FINANCIAL-ACCT-TABFI, SORTED-FILE,
                 DATE-TITLE-FILE
```

```
*****************************************************************
*
*                  FUND-BALANCE-FILE,
*
*****************************************************************
            OUTPUT PRINT-OUT.
 READ-DATE-TITLE-FILE.
     READ DATE-TITLE-FILE AT END
          MOVE 'EOF ON DATE TITLE FILE' TO PRINT-DATA
          PERFORM PRINT-LINE-OUT
          GO TO CLOSE-FILES.
 FILL-HEADING.
     MOVE DATE-IN TO DATE-OUT.
     MOVE FIRST-TITLE TO TITLE-1-HOLD.
     MOVE SECOND-TITLE TO TITLE-2-HOLD.
     MOVE NO-OF-UTILS TO NO-OF-UTILS-HOLD.
 PROCESS-SEVERAL-UTILITIES.
     IF UTIL-CODE-HOLD = SPACES
          GO TO CLOSE-FILES.
     PERFORM REWIND-INPUT-FILE.
     IF NO-OF-UTILS-HOLD = 0
          MOVE SPACES TO UTIL-CODE-HOLD
          MOVE TITLE-1-HOLD TO TITLE-1
          MOVE TITLE-2-HOLD TO TITLE-2
          MOVE 0 TO PAGE-NO
          GO TO HOUSE-KEEPING.
     SUBTRACT 1 FROM NO-OF-UTILS-HOLD.
     PERFORM READ-DATE-TITLE-FILE.
     MOVE FIRST-TITLE TO TITLE-1.
     MOVE SECOND-TITLE TO TITLE-2.
     MOVE UTILITY-CODE TO UTIL-CODE-HOLD.
     MOVE 0 TO PAGE-NO.
 HOUSE-KEEPING.
     IF UTIL-CODE-HOLD NOT = 'I'
          PERFORM CHANGE-HEADINGS.
     MOVE ZEROS TO SUB-TOTAL-ACCUM, TOTAL-ASSETS-ACCUM,
                   ASSETS-LIABILITIES-DIFFERENCE,
                   TOTAL-LIABILITIES-ACCUM, VALUE-ACCUMS.
     MOVE SPACES TO REC-HOLD.
 PRINT-HEADINGS.
     ADD 1 TO PAGE-NO.
     MOVE PAGE-NO TO PAGE-OUT.
     MOVE ZERO TO LINE-CT.
     MOVE SPACES TO PRINT-LINE.
     WRITE PRINT-LINE BEFORE NEW-PAGE.
     MOVE TITLE-LINE-1 TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
     MOVE TITLE-LINE-2 TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
     MOVE TITLE-LINE-3 TO PRINT-DATA.
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    PERFORM PRINT-LINE-OUT.
    MOVE TITLE-LINE-4 TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    MOVE TITLE-LINE-5 TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
    PERFORM PRINT-LINE-OUT.
    MOVE HEADING-1 TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    MOVE HEADING-2 TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    MOVE HEADING-3 TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
START-PROCESSING.
    PERFORM SUM-UP-FUNDS VARYING I
        FROM 1 BY 1 UNTIL I > 2.
    PERFORM WRITE-FINAL-TOTALS.
    GO TO PROCESS-SEVERAL-UTILITIES.
SUM-UP-FUNDS.
    ADD 6 I GIVING PRIMARY-PARM.
    MOVE SPACES TO DATA-LINE.
    MOVE DESC-TOP (I) TO DESC-TITLE-OUT.
    MOVE DATA-LINE TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
    MOVE 0 TO M.
    PERFORM SUM-UP-FUNDS-BY-FUNCTION THRU SUM-UP-FUNDS-END
        VARYING J FROM 1 BY 2 UNTIL J > 9.
    IF I = 1
        PERFORM MOVE-ASSETS-OUT VARYING K
        FROM 1 BY 1 UNTIL K > 5.
    IF I = 2
        PERFORM MOVE-LIABILITIES-OUT VARYING K
            FROM 1 BY 1 UNTIL K > 5.
    PERFORM MOVE-DOLLAR-SIGNS-OUT VARYING K
        FROM 1 BY 1 UNTIL K > 5.
    MOVE SPACES TO DESC-OUT.
    MOVE DESC-BOTTOM (I) TO DESC-TITLE-OUT.
    MOVE DATA-LINE TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    MOVE 90 TO LINE-CT.
    PERFORM MOVE-SPACES THRU PAGE-OVFLOW.
    MOVE SPACES TO DATA-LINE.
SUM-UP-FUNDS-BY-FUNCTION.
    IF UTIL-CODE-HOLD NOT = 'I'
        GO TO START-SUMMING-FUNDS.
    IF (I = 1) AND (J > 3)
        MOVE 10 TO J
        GO TO SUM-UP-FUNDS-END.
```

```
     IF (I = 2) AND (J = 3 OR 5 OR 9)
          ADD 2 TO M
          GO TO SUM-UP-FUNDS-END.
 START-SUMMING-FUNDS.
     MOVE J TO SECONDARY-PARM.
     ADD 1 TO M.
     PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
     PERFORM PRINT-LINE-OUT THRU PAGE-OVFLOW.
     MOVE SPACES TO DATA-LINE.
     IF I = 1
          MOVE ASSET-NAMES (M) TO DESC-OUT
     ELSE MOVE LIABILITY-NAME (M) TO DESC-OUT.
     MOVE DATA-LINE TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
     PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
     MOVE SPACES TO DATA-LINE.
     ADD 1 TO M.
 VERIFY-FOR-HOLD-RECORD.
     IF REC-HOLD NOT = SPACES
          MOVE REC-HOLD TO INPUT-REC
          MOVE SPACES TO REC-HOLD
          GO TO VERIFY-MATCH-CODE.
 READ-ACCT-RECORD.
     READ SORTED-FILE AT END
          MOVE 10 TO J
          MOVE 3 TO I
          GO TO WRITE-OUT-TOTALS.
*****
*    THE ABOVE STATEMENTS WILL STOP THE I & J LOOPS
*    ON AN EOF CONDITION.
*****
 VERIFY-MATCH-CODE.
     IF FRS-MATCH-CODE NOT NUMERIC
          GO TO READ-ACCT-RECORD.
     IF UTIL-CODE-IN NOT = UTIL-CODE-HOLD
          GO TO READ-ACCT-RECORD.
     IF FRS-POS-1 < PRIMARY-PARM
          GO TO READ-ACCT-RECORD.
     IF FRS-POS-1 NOT = PRIMARY-PARM
          GO TO WRITE-OUT-TOTALS.
     IF FRS-POS-2 > SECONDARY-PARM
          GO TO WRITE-OUT-TOTALS.
 SET-UP-FOR-NEW-REC.
     MOVE FRS-MATCH-CODE TO MATCH-HOLD
     MOVE ACCT-NO TO FA-NOMINAL.
     READ FINANCIAL-ACCT-TABFI INVALID KEY
          PERFORM INVALID-KEY-PROC.
 SUM-UP-INDIVIDUAL-ACCTS.
     IF FUND-TYPE = 6
          MOVE 5 TO FUND-TYPE.
```

```
    ADD AMOUNTS (3) TO TOT-ACCUM-BY-LINE (2)
                       TOT-DIFF (2), TOT-DIFF-FUNDS (FUND-TYPE),
                       FUND-ACCUM-BY-LINE (FUND-TYPE).
    ADD AMOUNTS (1) TO TOT-ACCUM-BY-LINE (1),
                       TOT-DIFF (1).
    PERFORM READ-ACCT-RECORD THRU VERIFY-MATCH-CODE.
    IF FRS-MATCH-CODE = MATCH-HOLD
        GO TO SUM-UP-INDIVIDUAL-ACCTS.
    MOVE INPUT-REC TO REC-HOLD.
WRITE-ACCT-LINE.
    PERFORM MOVE-LINE-TOTALS-OUT VARYING K
        FROM 1 BY 1 UNTIL K > 2.
    PERFORM MOVE-LINE-FUNDS-OUT VARYING K
        FROM 1 BY 1 UNTIL K > 5.
    MOVE FA-NAME (1) TO DESC-TITLE-OUT.
    MOVE DATA-LINE TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    MOVE SPACES TO DATA-LINE.
    IF FA-NAME (2) NOT = SPACES
        MOVE FA-NAME (2) TO DESC-TITLE-OUT
        MOVE DATA-LINE TO PRINT-DATA
        PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PAGE-OVFLOW.
    MOVE SPACES TO FA-NAME (1) FA-NAME (2).
RETURN-TO-VERIFY-HOLD-REC.
    GO TO VERIFY-FOR-HOLD-RECORD.
WRITE-OUT-TOTALS.
    MOVE SPACES TO DATA-LINE.
    MOVE INPUT-REC TO REC-HOLD.
        PERFORM WRITE-ACCT-LINE.
        PERFORM PRINT-SUB-TOTAL.
SUM-UP-FUNDS-END.
    EXIT.
PRINT-SUB-TOTAL.
    IF I = 1 MOVE
        ASSET-NAMES (M)   TO DESC-OUT
    ELSE MOVE LIABILITY-NAME (M)   TO DESC-OUT.
    PERFORM MOVE-DOLLAR-SIGNS-OUT VARYING K
        FROM 1 BY 1 UNTIL K > 5.
    PERFORM MOVE-SUB-TOTAL-OUT VARYING K
        FROM 1 BY 1 UNTIL K > 2.
    PERFORM MOVE-SUB-TOTAL-FUNDS-OUT VARYING K
        FROM 1 BY 1 UNTIL K > 5.
    MOVE DATA-LINE TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PAGE-OVFLOW.
MOVE-LINE-TOTALS-OUT.
    MOVE TOT-ACCUM-BY-LINE (K) TO
        FUND-TOT OF FUND-TOTALS-OUT (K).
    ADD TOT-ACCUM-BY-LINE (K) TO
```

```
        SUB-TOTALS (K).
    MOVE ZEROS TO TOT-ACCUM-BY-LINE (K).
MOVE-LINE-FUNDS-OUT.
    MOVE FUND-ACCUM-BY-LINE (K) TO
        FUND-VALUE OF FUND-VALUES-OUT (K).
    ADD FUND-ACCUM-BY-LINE (K) TO
        SUB-TOTAL-FUNDS (K).
    MOVE ZEROS TO FUND-ACCUM-BY-LINE (K).
MOVE-DOLLAR-SIGNS-OUT.
    IF K < 3
        MOVE DOLLAR-SIGN TO DOLLAR-SIGN-1 (K).
    MOVE DOLLAR-SIGN TO DOLLAR-SIGN-2 (K).
MOVE-ASSETS-OUT.
    IF K < 3
        MOVE TOTAL-ASSETS (K) TO
        FUND-TOT OF FUND-TOTALS-OUT (K).
    MOVE TOTAL-ASSETS-FUNDS (K) TO
        FUND-VALUE OF FUND-VALUES-OUT (K).
MOVE-LIABILITIES-OUT.
    IF K < 3
        MOVE TOTAL-LIABILITIES (K) TO
        FUND-TOT OF FUND-TOTALS-OUT (K).
    MOVE TOTAL-LIABILITIES-FUNDS (K) TO
        FUND-VALUE OF FUND-VALUES-OUT (K).
MOVE-SUB-TOTAL-OUT.
    MOVE SUB-TOTALS (K) TO
        FUND-TOT OF FUND-TOTALS-OUT (K).
    IF I = 1
        ADD SUB-TOTALS (K) TO TOTAL-ASSETS (K)
    ELSE ADD SUB-TOTALS (K) TO TOTAL-LIABILITIES (K).
    MOVE ZEROS TO SUB-TOTALS (K).
MOVE-SUB-TOTAL-FUNDS-OUT.
    MOVE SUB-TOTAL-FUNDS (K) TO FUND-VALUE
        OF FUND-VALUES-OUT (K).
    IF I = 1
        ADD SUB-TOTAL-FUNDS (K) TO TOTAL-ASSETS-FUNDS (K)
    ELSE ADD SUB-TOTAL-FUNDS (K) TO
        TOTAL-LIABILITIES-FUNDS (K).
    MOVE ZEROS TO SUB-TOTAL-FUNDS (K).
MOVE-SPACES.
    MOVE SPACES TO PRINT-LINE.
PRINT-LINE-OUT.
    WRITE PRINT-LINE BEFORE ADVANCING 1.
    ADD 1 TO LINE-CT.
PAGE-OVFLOW.
    IF LINE-CT > MAX-LINE
        PERFORM PRINT-HEADINGS.
INVALID-KEY-PROC.
    MOVE 'INVALID KEY NO.' TO DESC-OUT.
    MOVE DATA-LINE TO PRINT-DATA.
```

```
     PERFORM PRINT-LINE-OUT.
     MOVE SPACES TO DESC-OUT.
     MOVE ACCT-NO TO DESC-TITLE-OUT.
     MOVE DATA-LINE TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
******************************************************************
*
*MOVE-OUT-FUND-BALANCES.
*    MOVE FUND-BALANCE (K) TO FUND-VALUE OF FUND-VALUES-OUT (K).
*
******************************************************************
 MOVE-TOTAL-DIFF-OUT.
     MOVE TOT-DIFF-FUNDS (K) TO
         FUND-VALUE OF FUND-VALUES-OUT (K).
 CHANGE-HEADINGS.
     MOVE SPACES TO TEMP-HEAD-1-2, TEMP-HEAD-2-3.
     MOVE 'OPERATION AND'    TO TEMP-HEAD-1-1.
     MOVE 'MAINTENANCE'      TO TEMP-HEAD-2-1.
     MOVE 'DEPRECIATION'     TO TEMP-HEAD-2-2.
     MOVE 'FUND' TO TEMP-HEAD-3-1 TEMP-HEAD-3-2.
     MOVE 'PLANT FUND ' TO TEMP-HEAD-3-3.
 WRITE-FINAL-TOTALS.
     PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
******************************************************************
*
*    READ FUND-BALANCE-FILE AT END
*        MOVE 'NO DATA IN FUND BALANCE FILE '
*        TO PRINT-DATA
*        PERFORM PRINT-LINE-OUT.
*    IF (FUND-BALANCE (5) = 0) AND (FUND-BALANCE (6) NOT = 0)
*        MOVE FUND-BALANCE (6) TO FUND-BALANCE (5).
*    PERFORM MOVE-OUT-FUND-BALANCES VARYING K
*        FROM 1 BY 1 UNTIL K > 5.
*    MOVE TOTAL-FUND-BALANCE TO FUND-TOT OF FUND-TOTALS-OUT (2).
*
*
*  THE FOLLOWING IF STATEMENT WILL MOVE THE FUND VALUE
*  OF IND. (FUND = 6) TO THE FIFTH POSITION, FOR PRINTING.
*
******************************************************************
     IF (TOT-DIFF-FUNDS (5) = 0) AND (TOT-DIFF-FUNDS (6) NOT = 0)
         MOVE TOT-DIFF-FUNDS (6) TO TOT-DIFF-FUNDS (5).
     MOVE TOT-DIFF (1) TO FUND-TOT OF FUND-TOTALS-OUT (1).
     MOVE TOT-DIFF (2) TO FUND-TOT OF FUND-TOTALS-OUT (2).
     PERFORM MOVE-TOTAL-DIFF-OUT VARYING K
         FROM 1 BY 1 UNTIL K > 5.
     PERFORM MOVE-DOLLAR-SIGNS-OUT VARYING K
         FROM 1 BY 1 UNTIL K > 5.
     PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
     MOVE 'FUND BALANCES' TO DESC-OUT.
```

```
           MOVE DATA-LINE TO PRINT-DATA.
           PERFORM PRINT-LINE-OUT.
       REWIND-INPUT-FILE.
           CLOSE SORTED-FILE.
           OPEN INPUT SORTED-FILE.
       CLOSE-FILES.
           CLOSE   SORTED-FILE, DATE-TITLE-FILE,
      ****************************************************************
      *
      *                    FUND-BALANCE-FILE,
      *
      ****************************************************************
                    FINANCIAL-ACCT-TABFI, PRINT-OUT.
       STOP-RUN.
           STOP RUN.
/*
//
/*EOF
```

```
//     PGMNAME=FAMSBUCM
//COB.SYSIN    DD *
       ID DIVISION.
       PROGRAM-ID. FAMSBUCM.
       AUTHOR. ACT SYSTEMS, INC
                SUITE 200
                807 W MORSE BLVD
                WINTER PARK, FL 32789.
       DATE-WRITTEN. JAN 1978
       DATE-COMPILED.
       REMARKS.    THIS PROGRAM BACKS UP THE CM FILE
                   AND PRODUCES A COPY OF SAME.
       ENVIRONMENT DIVISION.
       CONFIGURATION SECTION.
       SOURCE-COMPUTER. IBM-370.
       OBJECT-COMPUTER. IBM-370.
       SPECIAL-NAMES.
           C01 IS NEW-PAGE.
       INPUT-OUTPUT SECTION.
       FILE-CONTROL.
           SELECT CARD-IN
               ASSIGN TO UR-2540R-S-CARDIN
               ACCESS MODE IS SEQUENTIAL.
           SELECT PRINT-OUT
               ASSIGN TO UR-1403-S-PRINTOUT
               ACCESS MODE IS SEQUENTIAL.
           SELECT CROSS-MATRIX-FILE
               ASSIGN TO DA-3330-I-CMFILE
               ACCESS MODE IS SEQUENTIAL
               RECORD KEY IS CM-NUMBER.
           SELECT TAPE-OUT
               ASSIGN TO UT-2400-S-TAPEOUT
               ACCESS MODE IS SEQUENTIAL.
       DATA DIVISION.
       FILE SECTION.
       FD  CROSS-MATRIX-FILE
           BLOCK CONTAINS 5 RECORDS
           RECORD CONTAINS 80 CHARACTERS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS INPUT-REC.
       01  INPUT-REC.
           05  MATCH-CODE-IN.
               10  DELETE-POS      PIC X.
               10  FILLER          PIC X(3).
           05  CM-NUMBER.
               10  ACCT-NO-IN      PIC X(10).
           05  FUND-NO-IN          PIC X(2).
           05  ACCT-TYPE-IN        PIC X(2).
           05  FILLER              PIC X(2).
           05  AMOUNTS-IN OCCURS 6 TIMES.
```

```
         10  AMT-IN       PIC S9(8)V99.
 FD  TAPE-OUT
     BLOCK CONTAINS 5 RECORDS
     RECORD CONTAINS 80 CHARACTERS
     LABEL RECORDS ARE STANDARD
     DATA RECORD IS TAPE-REC.
 01  TAPE-REC                 PIC X(80).
 FD  PRINT-OUT
     RECORD CONTAINS 133 CHARACTERS
     LABEL RECORDS ARE OMITTED
     DATA RECORD IS PRINT-LINE.
 01  PRINT-LINE.
     05  FILLER               PIC X.
     05  PRINT-DATA           PIC X(132).
 FD  CARD-IN
     RECORD CONTAINS 80 CHARACTERS
     LABEL RECORDS ARE OMITTED
     DATA RECORD IS INPUT-CARD.
 01  INPUT-CARD.
     05  DATE-IN.
         10  BACKUP-OPTION PIC X(7).
         10  FILLER        PIC X(11).
     05  TITLE-IN             PIC X(24).
     05  FILLER               PIC X(38).
 WORKING-STORAGE SECTION.
 77  LINE-CT                  PIC 99 COMP VALUE 0.
 77  PAGE-CT                  PIC 9(4) COMP VALUE 0.
 77  MAX-LINE                 PIC 99 COMP VALUE 56.
 77  I                        PIC 9.
 77  BACKUP-FLAG              PIC 9 VALUE 0.
 01  HEAD-1.
     05  FILLER               PIC X(55) VALUE SPACES.
     05  FILLER               PIC X(24) VALUE 'CROSS MATRIX FILE BACKU
-                                             'P'.
     05  FILLER               PIC X(53) VALUE SPACES.
 01  HEAD-2.
     05  FILLER               PIC X(13) VALUE 'DATE ENDING: '.
     05  DATE-OUT             PIC X(18).
     05  FILLER               PIC X(34) VALUE SPACES.
     05  FILLER               PIC X(3)  VALUE 'FOR'.
     05  FILLER               PIC X(54) VALUE SPACES.
     05  FILLER               PIC X(6)  VALUE 'PAGE: '.
     05  PAGE-OUT             PIC Z(4).
 01  HEAD-3.
     05  FILLER               PIC X(55) VALUE SPACES.
     05  TITLE-OUT            PIC X(24).
     05  FILLER               PIC X(53) VALUE SPACES.
 01  HEAD-4.
     05  FILLER               PIC X(14) VALUE '* KEY FIELD **'.
     05  FILLER               PIC X(51) VALUE SPACES.
```

```
    05  FILLER            PIC X(7)  VALUE 'CURRENT'.
    05  FILLER            PIC X(4)  VALUE SPACES.
    05  FILLER            PIC X(8)  VALUE 'PREVIOUS'.
    05  FILLER            PIC X(5)  VALUE SPACES.
    05  FILLER            PIC X(7)  VALUE 'CURRENT'.
    05  FILLER            PIC X(5)  VALUE SPACES.
    05  FILLER            PIC X(7)  VALUE 'CURRENT'.
    05  FILLER            PIC X(5)  VALUE SPACES.
    05  FILLER            PIC X(8)  VALUE 'PREVIOUS'.
    05  FILLER            PIC X(3)  VALUE SPACES.
    05  FILLER            PIC X(8)  VALUE 'NOT USED'.
01  HEAD-5.
    05  FILLER            PIC X(1)  VALUE SPACES.
    05  FILLER            PIC X(10) VALUE 'ACCOUNT NO'.
    05  FILLER            PIC X(6)  VALUE SPACES.
    05  FILLER            PIC X(7)  VALUE 'FUND NO'.
    05  FILLER            PIC X(5)  VALUE SPACES.
    05  FILLER            PIC X(9)  VALUE 'ACCT TYPE'.
    05  FILLER            PIC X(3)  VALUE SPACES.
    05  FILLER            PIC X(10) VALUE 'MATCH CODE'.
    05  FILLER            PIC X(26) VALUE SPACES.
    05  FILLER            PIC X(5)  VALUE 'MONTH'.
    05  FILLER            PIC X(8)  VALUE SPACES.
    05  FILLER            PIC X(5)  VALUE '(YTD)'.
    05  FILLER            PIC X(3)  VALUE SPACES.
    05  FILLER            PIC X(12) VALUE 'BUDGET (YTD)'.
    05  FILLER            PIC X(5)  VALUE SPACES.
    05  FILLER            PIC X(4)  VALUE 'YEAR'.
    05  FILLER            PIC X(13) VALUE SPACES.
01  DATA-LINE.
    05  FILLER            PIC X(2).
    05  CM-NUMBER-1.
        10  ACCT-NO       PIC X(10).
    05  FILLER            PIC X(8).
    05  FUND-NO           PIC XX.
    05  FILLER            PIC X(11).
    05  ACCT-TYPE         PIC XX.
    05  FILLER            PIC X(9).
    05  MATCH-CODE        PIC X(4).
    05  FILLER            PIC X(12).
    05  AMOUNTS OCCURS 6 TIMES.
        10  AMT           PIC -(9).--.
01  ACCOUNT-ACCUM.
    05  ACCT-ACCUM        PIC S9(8)V99 OCCURS 6 TIMES.
PROCEDURE DIVISION.
OPEN-FILES.
    OPEN INPUT  CROSS-MATRIX-FILE,
                CARD-IN,
         OUTPUT PRINT-OUT.
FILL-HEADING.
```

```
    READ CARD-IN AT END
        PERFORM ERROR-CARD-IN
        GO TO CLOSE-FILES.
    MOVE DATE-IN TO DATE-OUT.
    MOVE TITLE-IN TO TITLE-OUT.
    READ CARD-IN AT END
        GO TO HOUSEKEEP.
    IF BACKUP-OPTION NOT = 'BACK-UP' THEN
        GO TO HOUSEKEEP.
OPEN-BACKUP-FILE.
    MOVE 1 TO BACKUP-FLAG.
    OPEN   OUTPUT TAPE-OUT.
HOUSEKEEP.
    MOVE ZEROS TO ACCOUNT-ACCUM.
WRITE-HEADINGS.
    ADD 1 TO PAGE-CT.
    MOVE PAGE-CT TO PAGE-OUT.
    MOVE 0 TO LINE-CT.
    PERFORM MOVE-SPACES.
    WRITE PRINT-LINE BEFORE NEW-PAGE.
    MOVE HEAD-1 TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    MOVE HEAD-2 TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    MOVE HEAD-3 TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES.
    PERFORM PRINT-LINE-OUT 2 TIMES.
    MOVE HEAD-4 TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    MOVE HEAD-5 TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
READ-INPUT-REC.
    READ CROSS-MATRIX-FILE AT END
        PERFORM WRITE-SUBTOTAL
        GO TO CLOSE-FILES.
START-BACKUP.
    MOVE ACCT-NO-IN TO ACCT-NO.
    MOVE FUND-NO-IN TO FUND-NO.
    MOVE ACCT-TYPE-IN TO ACCT-TYPE.
    MOVE MATCH-CODE-IN TO MATCH-CODE.
    PERFORM MOVE-AMOUNTS VARYING I FROM 1 BY 1 UNTIL I = 7.
    MOVE DATA-LINE TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    IF LINE-CT > MAX-LINE
        THEN PERFORM WRITE-HEADINGS.
    IF BACKUP-FLAG = 1 THEN
        MOVE INPUT-REC TO TAPE-REC
        WRITE TAPE-REC.
```

```
       GO TO READ-INPUT-REC.
   MOVE-SPACES.
       MOVE SPACES TO PRINT-LINE.
   PRINT-LINE-OUT.
       WRITE PRINT-LINE BEFORE 1.
       ADD 1 TO LINE-CT.
   MOVE-AMOUNTS.
       MOVE AMT-IN (I) TO AMT (I).
       ADD AMT-IN (I) TO ACCT-ACCUM (I).
   WRITE-SUBTOTAL.
       PERFORM MOVE-SPACES THRU PRINT-LINE-OUT 2 TIMES.
       MOVE SPACES TO DATA-LINE.
       PERFORM MOVE-ACCT-SUB  VARYING I FROM 1 BY 1 UNTIL I = 7.
       MOVE 'TOTAL     ' TO ACCT-NO.
       MOVE DATA-LINE TO PRINT-DATA.
       PERFORM PRINT-LINE-OUT.
   MOVE-ACCT-SUB.
       MOVE ACCT-ACCUM (I) TO AMT (I).
   ERROR-CARD-IN.
       MOVE '*** NO DATE/TITLE CARD *** JOB ABORTED'
           TO PRINT-DATA.
           PERFORM PRINT-LINE-OUT.
   CLOSE-FILES.
       CLOSE   CROSS-MATRIX-FILE,
               CARD-IN,
               PRINT-OUT.
   CLOSE-TAPE-FILE.
       IF BACKUP-FLAG NOT = 1 THEN
           GO TO E-O-J.
       CLOSE TAPE-OUT.
   E-O-J.
       STOP RUN.
/*
//
/*EOF
```

```
//          PGMNAME=FAMSUCAD
//COB.SYSIN    DD  *
       ID DIVISION.
       PROGRAM-ID. FAMSUCAD.
       AUTHOR. ACT SYSTEMS, INC
               SUITE 200
               807 W MORSE BLVD
               WINTER PARK, FL 32789.
       DATE-WRITTEN. MARCH 1978.
       DATE-COMPILED.
       REMARKS.    THIS PROGRAM READS A CARD IMAGE OF A
                   CROSS MATRIX RECORD AND EITHER CHANGES,
                   ADDS OR DELETES THE RECORD.
      *****
      *    AN ADDITIONAL OPTION ALLOWS ENTERING
      *    BUDGET DATA EASILY.
      *****
       ENVIRONMENT DIVISION.
       CONFIGURATION SECTION.
       SOURCE-COMPUTER. IBM-370.
       OBJECT-COMPUTER. IBM-370.
       SPECIAL-NAMES.
           C01 IS NEW-PAGE.
       INPUT-OUTPUT SECTION.
       FILE-CONTROL.
           SELECT CARD-IN
               ASSIGN TO UR-2540R-S-CARDIN
               ACCESS MODE IS SEQUENTIAL.
           SELECT PRINT-OUT
               ASSIGN TO UR-1403-S-PRINTOUT
               ACCESS MODE IS SEQUENTIAL.
           SELECT CROSS-MATRIX-FILE
               ASSIGN TO DA-3330-I-CMFILE
               ACCESS MODE IS RANDOM
               RECORD KEY IS CM-NUMBER
               NOMINAL KEY IS CM-NOMINAL.
           SELECT TAPE-IN
               ASSIGN TO UT-2400-S-TAPEIN
               ACCESS MODE IS SEQUENTIAL.
       DATA DIVISION.
       FILE SECTION.
       FD  CROSS-MATRIX-FILE
           BLOCK CONTAINS 5 RECORDS
           RECORD CONTAINS 80 CHARACTERS
           LABEL RECORDS ARE STANDARD
           DATA RECORD IS CM-REC.
       01  CM-REC.
           05  MATCH-CODE.
               10  DELETE-POS      PIC X.
               10  FILLER          PIC X(3).
```

```
    05  CM-NUMBER.
        10  ACCT-NO      PIC X(10).
    05  FUND-NO          PIC XX.
    05  ACCT-TYPE        PIC XX.
    05  FILLER           PIC XX.
    05  AMOUNTS.
        10  AMTS            PIC S9(8)V99  OCCURS 6 TIMES.
FD  TAPE-IN
    BLOCK CONTAINS 5 RECORDS
    RECORD CONTAINS 80 CHARACTERS
    LABEL RECORDS ARE STANDARD
    DATA RECORD IS TAPE-REC.
01  TAPE-REC             PIC X(80).
FD  CARD-IN
    RECORD CONTAINS 80 CHARACTERS
    LABEL RECORDS ARE OMITTED
    DATA RECORD IS INPUT-REC.
01  INPUT-REC.
    05  DATE-IN          PIC X(18).
    05  TITLE-IN         PIC X(24).
    05  FILLER           PIC X(38).
01  INPUT-REC-1.
    05  MATCH-CODE-IN    PIC X(4).
    05  INPUT-KEY.
        10  ACCT-IN      PIC X(10).
    05  FUND-NO-IN       PIC XX.
    05  ACCT-TYPE-IN     PIC XX.
    05  FILLER           PIC XX.
    05  AMOUNTS-IN       PIC X(60).
01  INPUT-REC-2.
    05  FILLER           PIC X(20).
    05  AMTS-IN          PIC S9(8)V99 OCCURS 6 TIMES.
FD  PRINT-OUT
    RECORD CONTAINS 133 CHARACTERS
    LABEL RECORDS ARE OMITTED
    DATA RECORD IS PRINT-LINE.
01  PRINT-LINE.
    05  PRINT-DATA       PIC X(132).
    05  FILLER           PIC X.
WORKING-STORAGE SECTION.
77  PAGE-CT              PIC 9(4)  COMP VALUE 0.
77  LINE-CT              PIC 9(2)  COMP VALUE 0.
77  MAX-LINE             PIC 9(2)  COMP VALUE 56.
77  INPUT-CT             PIC 9(4)V99 VALUE 0.
77  ADD-CT               PIC 9(4)V99 VALUE 0.
77  CHANGE-CT            PIC 9(4)V99 VALUE 0.
77  DELETE-CT            PIC 9(4)V99 VALUE 0.
77  ERROR-CT             PIC 9(4)V99 VALUE 0.
77  CM-NOMINAL           PIC X(10) VALUE SPACES.
77  I                    PIC 99    COMP VALUE 0.
```

```
 77  UPDATE-FLAG              PIC 9 VALUE 0.
 77  INPUT-DEVICE             PIC 9 VALUE 0.
 01  HEAD-1.
     05  FILLER               PIC X(54) VALUE SPACES.
     05  FILLER               PIC X(24) VALUE 'CHANGES ADDS AND DELETE
-                                         'S'.
     05  FILLER               PIC X(54) VALUE SPACES.
 01  HEAD-2.
     05  FILLER               PIC X(6)  VALUE 'DATE: '.
     05  DATE-OUT             PIC X(18).
     05  FILLER               PIC X(41) VALUE SPACES.
     05  FILLER               PIC X(2)  VALUE 'ON'.
     05  FILLER               PIC X(55) VALUE SPACES.
     05  FILLER               PIC X(6)  VALUE 'PAGE: '.
     05  PAGE-OUT             PIC Z(4).
 01  HEAD-3.
     05  FILLER               PIC X(54) VALUE SPACES.
     05  TITLE-OUT            PIC X(24).
     05  FILLER               PIC X(54) VALUE SPACES.
 01  HEAD-4.
     05  FILLER               PIC X(58) VALUE SPACES.
     05  FILLER               PIC X(17) VALUE 'CROSS MATRIX FILE'.
     05  FILLER               PIC X(57) VALUE SPACES.
 01  HEAD-5.
     05  FILLER               PIC X(7)  VALUE 'ACCOUNT'.
     05  FILLER               PIC X(6)  VALUE SPACES.
     05  FILLER               PIC X(4)  VALUE 'FUND'.
     05  FILLER               PIC X(3)  VALUE SPACES.
     05  FILLER               PIC X(4)  VALUE 'ACCT'.
     05  FILLER               PIC X(2)  VALUE SPACES.
     05  FILLER               PIC X(5)  VALUE 'MATCH'.
     05  FILLER               PIC X(6)  VALUE SPACES.
     05  FILLER               PIC X(7)  VALUE 'CURRENT'.
     05  FILLER               PIC X(5)  VALUE SPACES.
     05  FILLER               PIC X(8)  VALUE 'PREVIOUS'.
     05  FILLER               PIC X(9)  VALUE SPACES.
     05  FILLER               PIC X(3)  VALUE 'YTD'.
     05  FILLER               PIC X(8)  VALUE SPACES.
     05  FILLER               PIC X(6)  VALUE 'YEARLY'.
     05  FILLER               PIC X(9)  VALUE SPACES.
     05  FILLER               PIC X(3)  VALUE 'YTD'.
     05  FILLER               PIC X(6)  VALUE SPACES.
     05  FILLER               PIC X(8)  VALUE 'PREVIOUS'.
     05  FILLER               PIC X(7)  VALUE SPACES.
     05  FILLER               PIC X(8)  VALUE 'COMMENTS'.
     05  FILLER               PIC X(8)  VALUE SPACES.
 01  HEAD-6.
     05  FILLER               PIC X(7)  VALUE ' NUMBER'.
     05  FILLER               PIC X(5)  VALUE SPACES.
     05  FILLER               PIC X(6)  VALUE 'NUMBER'.
```

```
           05  FILLER          PIC X(2)  VALUE SPACES.
           05  FILLER          PIC X(4)  VALUE 'TYPE'.
           05  FILLER          PIC X(3)  VALUE SPACES.
           05  FILLER          PIC X(4)  VALUE 'CODE'.
           05  FILLER          PIC X(7)  VALUE SPACES.
           05  FILLER          PIC X(6)  VALUE 'AMOUNT'.
           05  FILLER          PIC X(7)  VALUE SPACES.
           05  FILLER          PIC X(5)  VALUE 'MONTH'.
           05  FILLER          PIC X(8)  VALUE SPACES.
           05  FILLER          PIC X(6)  VALUE 'AMOUNT'.
           05  FILLER          PIC X(7)  VALUE SPACES.
           05  FILLER          PIC X(6)  VALUE 'BUDGET'.
           05  FILLER          PIC X(7)  VALUE SPACES.
           05  FILLER          PIC X(6)  VALUE 'BUDGET'.
           05  FILLER          PIC X(7)  VALUE SPACES.
           05  FILLER          PIC X(4)  VALUE 'YEAR'.
           05  FILLER          PIC X(25) VALUE SPACES.
       01  DATA-LINE.
           05  ACCT-OUT        PIC X(10).
           05  FILLER          PIC X(4).
           05  FUND-NO-OUT     PIC XX.
           05  FILLER          PIC X(5).
           05  ACCT-TYPE-OUT   PIC XX.
           05  FILLER          PIC X(3).
           05  MATCH-CODE-OUT  PIC X(4).
           05  FILLER          PIC X.
           05  AMOUNTS-OUT OCCURS 6 TIMES.
               10  CODE-NAME   PIC X(2).
               10  AMTS-OUT    PIC -(8).--.
           05  FILLER          PIC X(3).
           05  COMMENT         PIC X(20).
       PROCEDURE DIVISION.
       OPEN-FILES.
           OPEN I-O    CROSS-MATRIX-FILE,
                INPUT  CARD-IN,
                OUTPUT PRINT-OUT.
       FILL-HEADING.
           READ CARD-IN AT END GO TO WRITE-RECORD-COUNTS.
           MOVE DATE-IN TO DATE-OUT.
           MOVE TITLE-IN TO TITLE-OUT.
       WRITE-HEADINGS.
           ADD 1 TO PAGE-CT.
           MOVE 0 TO LINE-CT.
           MOVE PAGE-CT TO PAGE-OUT.
           PERFORM MOVE-SPACES.
           WRITE PRINT-LINE BEFORE NEW-PAGE.
           MOVE HEAD-1 TO PRINT-DATA.
           PERFORM PRINT-LINE-OUT.
           MOVE HEAD-2 TO PRINT-DATA.
           PERFORM PRINT-LINE-OUT.
```

```
     MOVE HEAD-3 TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
     MOVE HEAD-4 TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
     PERFORM MOVE-SPACES.
     PERFORM PRINT-LINE-OUT 2 TIMES.
     MOVE HEAD-5 TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
     MOVE HEAD-6 TO PRINT-DATA.
     PERFORM PRINT-LINE-OUT.
     PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
 HOUSEKEEP.
     MOVE SPACES TO DATA-LINE.
 UPDATE-FILE-YES-OR-NO.
     PERFORM READ-CARD-IN.
     IF ACCT-IN = 'BUDGET    ' THEN
         GO TO UPDATE-BUDGET-DATA.
     IF ACCT-IN NOT = 'UPDATE    ' THEN
         ADD 1 TO INPUT-CT
         GO TO START-UPDATE.
     MOVE 1 TO UPDATE-FLAG.
 TEST-FOR-INPUT-DEVICE.
     READ CARD-IN AT END
     MOVE 1 TO INPUT-DEVICE
         PERFORM OPEN-TAPE-FILE
         GO TO READ-INPUT.
*
*
*  THE ABOVE CONDITION IS FOR TAPE INPUT USED
*  TO RECREATE THE CM FILE FROM THE BACKUP TAPE
*
*
*  THE FOLLOWING IS FOR CARD INPUT USED TO
*  MAKE CHANGES, ADDS, OR DELETES TO THE CM-FILE.
*
*
     ADD 1 TO INPUT-CT.
     GO TO START-UPDATE.
 READ-INPUT.
     IF INPUT-DEVICE = 0 THEN
         PERFORM READ-CARD-IN
     ELSE PERFORM READ-TAPE-IN.
     ADD 1 TO INPUT-CT.
 START-UPDATE.
     MOVE ACCT-IN TO ACCT-OUT.
     MOVE FUND-NO-IN TO FUND-NO-OUT.
     MOVE ACCT-TYPE-IN TO ACCT-TYPE-OUT.
     IF (MATCH-CODE-IN = SPACES) AND (AMOUNTS-IN = SPACES)
         AND (FUND-NO-IN = SPACES) AND (ACCT-TYPE-IN = SPACES)
         GO TO DELETE-RECORD.
```

```
          MOVE MATCH-CODE-IN TO MATCH-CODE-OUT.
          EXAMINE AMOUNTS-IN REPLACING ALL ' ' BY '0'.
      MOVE-VALUES.
          PERFORM MOVE-AMTS-IN-TO-AMTS-OUT VARYING I
              FROM 1 BY 1 UNTIL I = 7.
      VERIFY-KEY.
          IF ACCT-IN = SPACES
              MOVE '*** INVALID KEY ***' TO COMMENT
                  MOVE DATA-LINE TO PRINT-DATA
                  PERFORM PRINT-LINE-OUT
                  PERFORM MOVE-SPACES THRU PRINT-LINE-OUT
                  ADD 1 TO ERROR-CT
                  GO TO READ-INPUT.
      READ-CM-FILE.
          MOVE INPUT-KEY TO CM-NOMINAL.
          READ CROSS-MATRIX-FILE INVALID KEY
              GO TO ADD-RECORD.
      CHANGE-RECORD.
          MOVE '*** NEW RECORD ***' TO COMMENT.
          MOVE DATA-LINE TO PRINT-DATA.
          PERFORM PRINT-LINE-OUT.
          MOVE MATCH-CODE TO MATCH-CODE-OUT.
          MOVE FUND-NO TO FUND-NO-OUT.
          MOVE ACCT-TYPE TO ACCT-TYPE-OUT.
          PERFORM MOVE-CM-AMTS-OUT VARYING I
              FROM 1 BY 1 UNTIL I = 7.
          MOVE '*** OLD RECORD  ***' TO COMMENT.
          MOVE DATA-LINE TO PRINT-DATA.
          PERFORM PRINT-LINE-OUT.
          PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
          PERFORM PAGE-OVFLOW.
          ADD 1 TO CHANGE-CT.
          MOVE MATCH-CODE-IN TO MATCH-CODE.
          MOVE FUND-NO-IN TO FUND-NO.
          MOVE ACCT-TYPE-IN TO ACCT-TYPE.
          PERFORM MOVE-AMTS-IN-TO-DISK-AMTS VARYING I
              FROM 1 BY 1 UNTIL I = 7.
          IF UPDATE-FLAG = 1 THEN
              REWRITE CM-REC.
          MOVE SPACES TO DATA-LINE.
          GO TO READ-INPUT.
      ADD-RECORD.
          MOVE '*** RECORD ADDED ***' TO COMMENT.
          MOVE DATA-LINE TO PRINT-DATA.
          PERFORM PRINT-LINE-OUT.
          PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
          MOVE ACCT-IN TO ACCT-NO.
          MOVE FUND-NO-IN TO FUND-NO.
          MOVE ACCT-TYPE-IN TO ACCT-TYPE.
          MOVE MATCH-CODE-IN TO MATCH-CODE.
```

```
    PERFORM MOVE-AMTS-IN-TO-DISK-AMTS VARYING I
        FROM 1 BY 1 UNTIL I = 7.
    MOVE CM-NUMBER TO CM-NOMINAL.
    IF UPDATE-FLAG = 1 THEN
        WRITE CM-REC.
    PERFORM PAGE-OVFLOW.
    ADD 1 TO ADD-CT.
    MOVE SPACES TO DATA-LINE.
    GO TO READ-INPUT.
DELETE-RECORD.
    MOVE '*** RECORD DELETED *' TO COMMENT.
    MOVE DATA-LINE TO PRINT-DATA.
        PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
    ADD 1 TO DFLETE-CT.
    PERFORM PAGE-OVFLOW.
    IF UPDATE-FLAG = 0 THEN
        GO TO READ-INPUT.
    MOVE INPUT-KEY TO CM-NOMINAL.
    READ CROSS-MATRIX-FILE INVALID KEY
        GO TO READ-INPUT.
    MOVE ZEROS TO MATCH-CODE, AMOUNTS.
    MOVE SPACES TO FUND-NO, ACCT-TYPE.
    MOVE HIGH-VALUE  TO DELETE-POS.
    REWRITE CM-REC.
    GO TO READ-INPUT.
PAGE-OVFLOW.
    IF LINE-CT NOT < MAX-LINE THEN
        PERFORM WRITE-HEADINGS.
MOVE-SPACES.
    MOVE SPACES TO PRINT-LINE.
PRINT-LINE-OUT.
    WRITE PRINT-LINE BEFORE 1.
    ADD 1 TO LINE-CT.
MOVE-AMTS-IN-TO-AMTS-OUT.
    MOVE AMTS-IN (I) TO AMTS-OUT OF AMOUNTS-OUT (I).
MOVE-CM-AMTS-OUT.
    MOVE AMTS (I) TO AMTS-OUT OF AMOUNTS-OUT (I).
MOVE-AMTS-IN-TO-DISK-AMTS.
    MOVE AMTS-IN (I) TO AMTS (I).
UPDATE-BUDGET-DATA.
    PERFORM READ-CARD-IN.
    IF ACCT-IN NOT = 'UPDATE     ' THEN
        ADD 1 TO INPUT-CT
        GO TO SELECT-BUDGET-ACCT.
    MOVE 1 TO UPDATE-FLAG.
READ-BUDGET-DATA.
    PERFORM READ-CARD-IN.
    ADD 1 TO INPUT-CT.
SELECT-BUDGET-ACCT.
```

```
    PERFORM START-UPDATE.
    MOVE INPUT-KEY TO CM-NOMINAL.
    READ CROSS-MATRIX-FILE INVALID KEY
        MOVE 'INVALID BUDGET ACCT ' TO COMMENT
        MOVE DATA-LINE TO PRINT-DATA
        PERFORM PRINT-LINE-OUT
        ADD 1 TO ERROR-CT
        GO TO READ-BUDGET-DATA.
    MOVE AMTS-IN (1) TO AMTS-OUT OF AMOUNTS-OUT (4), AMTS (4).
    MOVE 'BUDGET DATA ONLY' TO COMMENT.
    MOVE DATA-LINE TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    ADD 1 TO CHANGE-CT.
    IF UPDATE-FLAG = 1 THEN
        REWRITE CM-REC.
    MOVE SPACES TO DATA-LINE.
    GO TO READ-BUDGET-DATA.
READ-CARD-IN.
    READ CARD-IN AT END
        GO TO WRITE-RECORD-COUNTS.
READ-TAPE-IN.
    READ TAPE-IN AT END
        GO TO WRITE-RECORD-COUNTS.
    MOVE TAPE-REC TO INPUT-REC.
OPEN-TAPE-FILE.
    OPEN INPUT   TAPE-IN.
WRITE-RECORD-COUNTS.
    MOVE SPACES TO DATA-LINE.
    PERFORM MOVE-SPACES.
    WRITE PRINT-LINE BEFORE NEW-PAGE.
    MOVE 'I' TO CODE-NAME OF AMOUNTS-OUT (1).
    MOVE 'A' TO CODE-NAME OF AMOUNTS-OUT (2).
    MOVE 'C' TO CODE-NAME OF AMOUNTS-OUT (3).
    MOVE 'D' TO CODE-NAME OF AMOUNTS-OUT (4).
    MOVE 'E' TO CODE-NAME OF AMOUNTS-OUT (5).
    MOVE INPUT-CT  TO AMTS-OUT OF AMOUNTS-OUT (1).
    MOVE ADD-CT    TO AMTS-OUT OF AMOUNTS-OUT (2).
    MOVE CHANGE-CT TO AMTS-OUT OF AMOUNTS-OUT (3).
    MOVE DELETE-CT TO AMTS-OUT OF AMOUNTS-OUT (4).
    MOVE ERROR-CT  TO AMTS-OUT OF AMOUNTS-OUT (5).
    MOVE DATA-LINE TO PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
    PERFORM MOVE-SPACES THRU PRINT-LINE-OUT.
    IF UPDATE-FLAG = 1
        MOVE '** CROSS MARTIX FILE UPDATED ***' TO PRINT-DATA
    ELSE MOVE '** CROSS MATRIX FILE NOT UPDATED ***' TO
        PRINT-DATA.
    PERFORM PRINT-LINE-OUT.
CLOSE-TAPE-FILE.
    IF INPUT-DEVICE = 0 THEN
```

```
                GO TO CLOSE-FILES.
            CLOSE TAPE-IN.
        CLOSE-FILES.
            CLOSE   CROSS-MATRIX-FILE,
                    CARD-IN,
                    PRINT-OUT.
        E-O-J.
            STOP RUN.
/*
//
/*EOF
```